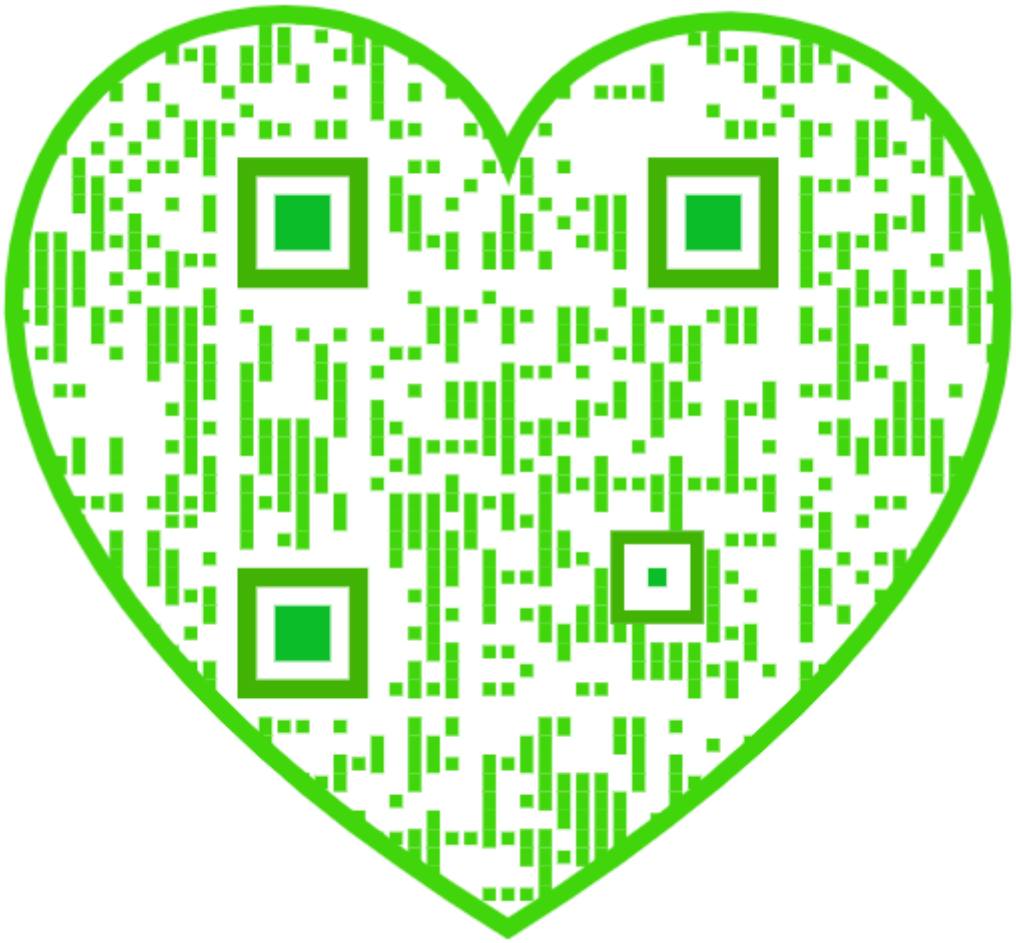

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UNITED STATES OF AMERICA.

THE FIRST BELGIAN HARE

Course of Instruction

Twenty Lessons.

Complete Directions for Buying, Sheltering, Breeding Killing, Skinning, Dressing, Tanning, Capon-izing, Cooking, Curing Ailments, Ex-hibiting, Judging, Shipping, De-veloping a Business, Etc.

With a History of the Belgian Hare Compiled from All Sources,

—AND—

Actual Experiences of Successful Breeders Everywhere,

TOLD BY THEMSELVES.

REVISED EDITION.

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SPECIAL NOTICE.

In order to protect this Course of Instruction as thoroughly as possible, we have designated by numbers the experiences furnished by breeders. We shall be glad to furnish a key giving the names of these breeders, with their addresses, on request from those who buy Belgian hares of us.

NEW ENGLAND BELGIAN HARE COMPANY.

COURSE NO. B.....

LESSON ONE.

——Introduction——

Need of Instruction Apparent to All—Recourse Had to Successful Breeders Everywhere—Trustworthy Advice from Old Breeders in England—Most Space in This Course Given to American Breeders and Their Ways—Special Effort to Make the Course Thoroughly Practical—No Disagreement Among Experienced Breeders—Breeders Should Organize for the Good of the Industry.

NEED of instruction in the breeding of Belgian hares is apparent to all, whether beginners, dealers, or those breeders who, by experience more or less costly, have learned what might have been theirs at the start, had not the industry then been in a new and unformed state. The ground has been gone over by so many that it would be a pity if the beginner could not have the benefit of their experiences, yet, with the exception of this First Course of Instruction, there is nothing of any kind—outside of trade catalogues, a few pamphlets, and the columns of the newspapers and pet stock journals—of a nature to be of help to the beginner or the expert, and such of the latter-named sources of information are not available unless one has the means to buy, the patience to collect, and the time to read and reflect upon all the various scattered articles.

In compiling this Course of twenty lessons, the plan has been to secure a reliable, authoritative and indispensable guide for all breeders of Belgian hares, whether beginners or not, and first and foremost, in gathering the facts, recourse was had to successful breeders everywhere, as the ones best fitted to give advice. These experiences are given word for word as written or talked by the breeders. The experiences chosen cover every field of the subject, and in presenting them an effort has been made to explain in detail the points which prove most perplexing to the young student as well as the points sought after by the adept.

The Belgian has made great progress in this country, but it should not be forgotten that the industry had its birth in Europe, and it is principally to the breeders of England that we must look for the most trustworthy advice concerning the care of rabbit stock. The rearing of rabbits has been common in England for many years; there are gray-headed men in that country who have raised prize rabbits all their lives, and their fathers have raised before them, and in this Course

of Instruction these practical English breeders have been appealed to freely. As the Belgian hare is a rabbit, and as all rabbits have practically the same nature, and thrive on the same food, and by the same methods of feeding, the compiler feels that no apology is needed for giving students the material furnished by the best English breeders. As the climatic and other conditions in this country are different from England's, greater space in this Course is given to the American breeders and their ways, and we think this feature will be found of especial value to the American breeder who is starting in the industry. The credit for the commercial development of the Belgian is to be given to this country, and as that side of the subject is of greatest importance, a special effort has been made to make the Course practical and of interest to those who wish to raise Belgians for profit, as well as to those who desire merely to raise pet or purely exhibition stock.

It has been stated by persons of limited observation and experience that there is considerable disagreement as to the proper food, mating and judging of Belgians, but this is not so. When the views of the experienced breeders are collected and compared, as they are in this Course, there is found to be no essential disagreement, except in minor matters. In this Course the student will find a method of handling which cannot fail to be successful.

Every student, if he is encouraged to become a breeder, should make up his mind to help himself by helping others. He should join with other breeders and strive to further the advancement of the industry in every way. Belgian hare associations in every section of the United States either are formed or are being formed, and the member is sure of finding companionship, and of receiving and giving information that will be of value. The quicker the industry is put on a solid footing, the better for all concerned.

We shall be pleased to hear from our students, and to know their experiences, and to add such experiences to future issues of this Course, if any new points of value are brought out. Climate and food stuffs vary with latitude and longitude, and information bearing on these points will be gratefully received.

Boston, Nov. 1, 1900.

LESSON TWO.

——History——

The Belgian Hare is a True Rabbit—How Rabbits Differ from Hares—Sterile Mules Born from Mating of Rabbit and Hare—Leading Characteristics of the True Belgian—Importance of the Standard Being the Same Common Measurement Everywhere — Every Breeder's Personal Interest Dependent upon Uniformity—How the Industry is Founded on a Rock—Not a Fad—Terms of the Standard—What They Mean—What the Expression "As Possible" in the Standard Calls For—"Rufous" a Good Dictionary Word—The True Color Defined.

THE Belgian hare is not a hare, but a rabbit.

It has an outward resemblance to the hare in the respects of size, and color of fur. The size is large and "racy" and the fur is a similar sandy tinge, but there the likeness ends.

The young of the hare are born perfect, with eyes open and fur on their bodies. The young of the Belgian, like the young of other rabbits, are born shapeless, blind, and almost naked. The wild hare gives birth to its young in a "form" on the surface of the ground. The rabbit gives birth underground, just as the Belgian would if many generations of captivity and nest littering had not almost obliterated its burrowing tendencies.

Its was supposed that the Belgian was a cross between the hare and the rabbit, but that supposition was demonstrated to be wrong by careful experiments in mating at zoological gardens in France and England. Young were born from such mating of the hare and the rabbit, but they were mules, and consequently sterile. The European rabbit fanciers are further advanced than any in this country, and began keeping records before our fanciers, and they are agreed that the story of the Belgian being a hare-rabbit, or a leporine, or leporide, is a story of the imagination, a myth. No breeders in this country ever have produced fruitful young by mating the hare and the rabbit. They have taken the Belgian as they found it in England, and developed it. The English prize-winning Belgian was chunkier, and its meat was not so palatable, as the standard Belgian is to-day. The American idea is to get a Belgian, that is, a rabbit, which will have the form and beauty of the wild hare and the commercial, easy-breeding qualities of the domestic rabbit. The

true Belgian to-day, as developed in this country, has a racy, hare-like body and hare-like ears, and its meat does not taste like the meat of the common rabbit, but is an improvement. The great American demand for the Belgian has affected the English standard. Our buyers are making frequent trips to England to secure Belgians of the hare-like body and other characteristics demanded in this country, and the foreign breeders, eager to get a market by pleasing our buyers, are devoting all their energies to developing the kind of animals we want. Therefore the judges in this country and England are getting together and agreeing in an unmistakeable way upon all the points which may provoke controversy. The industry is yet in its infancy in this country, and organization and agreement on the standard are comparatively recent. It is important that the standard of Europe and America, and indeed, the whole world, be the same, else it will be no standard, or common measurement, and there will be no confusion. However, every breeder sees that his personal interest is dependent upon uniformity, and his every expression is sure to be for a common standard.

The Belgian hare is the most useful of rabbits, and that is why there is good reason for concentration of efforts in developing and beautifying him. Breeders of cattle seek to raise the kind that will give the most and richest milk, the most and best-flavored meat and the biggest and best hide. According to the same reasoning, the Belgian hare is being developed. Of all rabbits, the Belgian is the most nicely balanced with respect to pelt, smallness of bone and flavor of meat.

Neither the Belgian hare, nor any other animal, would be bred in quantities on a large commercial scale simply for good looks, or adaptibility as a pet, but because it is useful as well as ornamental.

The ultimate destiny of the Belgian hare is the table and the manufactory.

That is why the Belgian hare industry is founded on a rock.

If it were a fad, like the collection of rare coins, beautiful porcelain, tulips, or postage stamps, it would have died out long ago, to be engaged in only by people of wealth or leisure, or both, who are the favored few that can afford the aesthetic or the beautiful in preference to the useful.

Just now, breeders of Belgians strive to keep them alive, because more breeders are coming forward all the time to

get stock for a start in business, and the only Belgians that find their way to the table and the hat and fur factories are those which are rejected for breeding purposes because they are faulty in color, markings, shape or breeding habits.

A rabbit still larger than the Belgian may be obtained by crossing it either with the Patagonian, the Flemish Giant or the Lop-Eared rabbit, but what is gained in weight is lost in extra weight of bone, quality of meat and good looks, or non-conformity to the accepted standard, the color being faulty, or something else being the matter. Still, the critic may say, it has more meat and a bigger pelt than the true Belgian. Nevertheless, breeders have agreed not to sacrifice the beautiful hare-like shape and handsome color of the true Belgian.

This standard should be firmly fixed in the mind, for it is the foundation of the Belgian hare business. It is like a foot rule with which a man starts to build machinery. If foot rules were of different lengths, objects made by one workman would not fit into places constructed by others, and chaos would result. If each section of the country had its own way of measuring, or judging, Belgian hares, then claims, terms, price-lists, arguments, etc., would not mean the same, and ambiguity and deception would follow. So a standard has been agreed upon, and it finds expression as follows, in condensed form:

COLOR—Rich rufous red (not dark, smudgy color) carried well down sides and hindquarters, and as little white under jaws as possible..... 20

TICKING—Rather wavy appearance and plentiful.... 15

SHAPE—Body long, thin, well tucked up flank and well ribbed up; back slightly arched; loins well rounded, not choppy; head rather lengthy; muscular chest; tail straight, not screwed; altogether of a racy appearance..... 20

EARS—About five inches long, thin, well laced on tips and as far down outside edges as possible; good color inside and outside and well set on..... 10

SIZE—About eight pounds..... 5

EYES—Hazel color, large, round, bright and bold..... 10

LEGS AND FEET—Fore feet and legs long, straight, slender, well colored and free from white bars; hind feet as well colored as possible..... 10

CONDITION—Not fat, but flesh firm like that of a racehorse, and good quality of fur..... 5

WITHOUT DEWLAP—..... 5
TOTAL 100
DISQUALIFICATIONS—1. Lopped, or fallen, ears. 2. White front feet or white bar or bars on same. 3. Decidedly wry front feet. 4. Wry tail. Note: A specimen should have the benefit of any doubt.

The foregoing needs considerable explanation to the beginner.

First, the color. It is not "rufus red," but rufous. R-u-f-o-u-s is a good dictionary word. Webster says it comes from the Latin rufus (fox) and defines it as follows: "Reddish; of a yellowish red or brownish red color; tawny." That is to say, the true Belgian is colored something like a fox or a lion. There is quite a difference in color between the fox and the lion, and the rufous color is a compromise. The "ticking" makes a difference in the outward appearance, also. By ticking is meant the black ends of the hairs. If we examine a hair from the back of a Belgian, we will find the end tipped with black. So when the ticking has a wavy appearance and is plentiful, as the standard calls for, the animal has a blackish, as well as a tawny appearance, the black being distributed in waves. You might think of the waves of the ocean having a red body, with a black surface where they break. The "whitecaps" of the waves of the coat of the Belgian are black. Get that picture fixed in your mind and you will have no difficulty in understanding what "ticking" is, and how it should look.

Second. Ears that are "well-laced on tips" are ears on which the black hairs run down something like the way a lacing runs down a shoe. It is another way of saying that the outside edges of the ears should be black, as if an artist had shaded them with a pencil.

Third. Dewlap. Shakespeare, you remember, said: "On her withered dewlap pour the ale," giving a burlesque reference to the flesh upon the human throat when flaccid, or flabby, with age. As usually applied, dewlap means the pendulous skin under the neck of the ox, which laps or licks the dew, in grazing.

If a specimen has any one of the four disqualifications mentioned, it is not good for breeding and therefore is regarded as worthless, good only for meat and hide, and not worth judging for points. Wry (twisted, distorted) front feet or tail would be reproduced in the progeny.

The expression "as possible" in the terms of the standard will be puzzling to many. It may mean little or nothing. Really, it is intended to convey the thought that the rufous color would cover all the legs and the whole of the jaw, in an absolutely perfectly-colored specimen.

The striking features of the Belgian are the hare-like shape and the rufous color. The term "rufous" may not be perfect, but it is better than "reddish-yellow," or "yellowish-red," which even more lack precision.

Fix the foregoing first principles and definition of terms firmly in mind and you will be able to comprehend intelligently the next lesson on how to buy.

LESSON THREE.

——How to Buy Intelligently——

Mail Order and Personal Examination—Easy for an Unprincipled Salesman to Palm Off an Inferior Belgian Before the Eyes of His Customer—Mail Order Method Thoroughly Safe if the Seller is Trustworthy and Has a Record for Square Dealing—Responsible Advertisers Will Give Full Value and Please Their Customers—The Most Desirable Belgians Are Imported—Our Most Experienced and Resourceful Buyers Making Frequent Trips to England—Remember That the Label Does Not Make the Goods—The Foolishness of Depending Upon Scores, Which Are Usually Only a Device of Swindlers to Sell Worthless Stock—Mercenary Judges—What Constitutes a Good Judge—Do Not Forget You Are Buying an Animal as Well as a Pedigree—Start with as Good Stock as You Can Afford—Belgians Healthy When Shipped Usually Will Remain Healthy.

HAVING become interested in the Belgian hare business, and desirous of engaging in it, the beginner will look around for stock, and he will need help on how and where to buy.

There are two ways of buying: First, by mail; second, by personal examination.

Everybody can form his or her own opinion of what he sees and handles. By comparison and asking questions, you can get good results, and at the same time you take full responsibility. Still, shrewd and unprincipled salesmen have no difficulty in palming off inferior goods of all kinds on innocent and credulous shoppers. They can make a sale to some foolish persons by enthusiastically claiming that this or that article is "fashionable," or they can convince others by the same glib tongue that stocks of a worthless company are going to pay dividends. The shrewdest of the confidence men depend upon meeting their victim personally for success. They fail when they write letters. The hypnotic influence of personal contact is missing from a letter.

So in many respects the mail order method of buying Belgian hares is to be preferred. At this time, and this stage of the business, it is almost necessary, for the reliable breeders are scattered. A beginner who makes up his mind to buy only after personal examination will find himself compelled to

make a railroad journey at more or less expense and loss of time, and even then he may be disappointed, for he will not wish to go home empty handed, and may "take anything" to have something to show for his pains.

In ordering by mail, there are many advantages in favor of the buyer, now. In the first place, the postal laws of the country are so strict that a swindler cannot conduct a business from his attic lodging room, hiring a cheap postoffice box, and giving nothing for the money of his dupes, without being brought up with a round turn. There are some swindles which the law cannot reach, but they are simple, for instance, the sale of a "diamond" for fifty cents. The swindler has a right to call his diamond a fanciful name, and may sell it, but only the young, foolish and credulous, or people looking for something for nothing, buy it. A person with any sense knows that a diamond cannot be bought for fifty cents. There are always plenty of people looking for something for nothing, and on this class the mail order sharper plays, getting as close to the line as he can. If these people will stop for a moment and consider that all business is entered into for the sake of a profit somewhere, they will see the utter absurdity of getting something for nothing.

Another safeguard is the newspapers and other periodicals in which Belgian hare dealers advertise. Most of them will not take advertisements from an irresponsible party. Some of them will refund to their readers money which those readers think has been taken from them unjustly by advertisers. Such periodicals make it a point to investigate the reliability and standing of every advertiser who applies for space in their columns.

Advertising is expensive, and as a rule, the Belgian hare dealers who advertise largely are responsible, having capital and business at stake, and dealings with them may be opened and carried on by correspondence with confidence. The buyer however, should not be prejudiced against the small dealers, many of whom are handling choice stock and attending to a small business carefully, and with a good knowledge of what they are doing. Some small dealers, having a fanciful conception of the value of their pets, ask prices entirely out of proportion to the value of their stock. The large dealers, as a rule, know the state of the market and are satisfied with a smaller profit than those who have only a few Belgians.

Do not forget that a reputable dealer in Belgian hares is

anxious to please you. A pleased customer is the best advertisement. If the buyer is not treated well by the dealer, he will tell his friends, and they will tell others, and the whole neighborhood soon will be on guard against trading with the man who failed to please. On the other hand, let a dealer be honest, and represent his stock just as it is, and he will find orders coming in from people who have personal knowledge of his squareness in treating others.

Look out for the sharper who is anxious to sell anything with four legs and a pair of ears that looks like a hare. The prospect of getting rich quick by selling all kinds of stock at high prices tempts the unscrupulous to dispose of anything. Be sure you get a sound, healthy specimen from a reliable dealer.

We do not think it will be disputed by reasonable people that the most desirable Belgian hares are imported. You will find some dealers, however, arguing that the best stock is now in Southern California, and that the best American Belgians are superior to the best foreign Belgians. Most of those who argue in that way, however, are interested in selling hares of the description they praise. We do not wish to underestimate the American bred Belgian hare, but the fact that our most experienced and resourceful buyers are making monthly trips to England to buy stock is proof enough that the choicest Belgians come from there, especially when we know that an intelligent market awaits imported Belgians. The prize-winning American specimens trace their ancestry back to England every time. England, Belgium and France are the starting places of all Belgian hare pedigrees, at the present development of the industry. Within a few years, at the present rate of progress, we shall not depend upon England for the choicest color and shape, for it is all a question of wise breeding.

It is not practicable for the beginner to import his own hares, if he is determined to start with an imported selection, but he can deal on this side of the Atlantic with an importer and accomplish his purpose just as well.

Remember, in buying, that the label does not make the goods. An imported hare may be as worthless as the most worthless scrub in America.

In buying, the test is, does the animal measure up to the standard stated and explained in the preceding lesson? The nearer it comes to scoring 100 points, the more valuable it is, provided, of course, that it is in a healthy condition, and

reared safely to maturity.

Now a word about scoring. You might think you were qualified to be a good judge of points. You would take the hare out of the dealer's hutch, place it on a table, take out your pencil and notebook and mark up the points of the animal. Suppose you were generally pleased, and arrived at a score of 94. You might say you felt like buying the hare, and the dealer, if he wished to make a sale regardless of principle, might say: "You are right; it is a great hare; my judgment makes the score 95 points. I think it is worth fully $100."

You should ask the dealer what he means by "his judging." Some dealers have so-called "judges" of their own who, for some reason, probably because they are in the employ and pay of their patrons, put wonderfully high scores on Belgians belonging to said patrons, but remarkably low scores on the Belgians of rival dealers. Beware of such "judges." They are mercenaries and will put a score on an animal in proportion to the size of their fees.

The true judge is a man of honor and principle, as well as extraordinary good judgment. He must not only be well-meaning and square in his dealings, but also of quick perception, and skilled in the art of detecting tricks. The ideal judge would be a gentleman of culture, experience and standing, financially entirely independent of the Belgian hare business. Such men are hard to find. An admirable substitute is the thoroughly reliable, trustworthy gentleman, poor, maybe, but determined to do the square and the honorable thing at all times. The best Belgian hare judges we have make a living this way: If they do not raise Belgians themselves, they may hire themselves out as judges, charging from $1 to as high as $15 for scoring a single animal. The wise judge demands his fee in advance before seeing the Belgian to be judged. In all cases, he is paid for his labor, not the size of his score. There should be no temptation for him to stretch his judgment and principles.

We will have more to say about judges and judging in a special lesson. The point which we wish to make clear now, and to emphasize, is, that the buyer must make sure that the judge who scored the animal he wants was a reliable one, and that the points for which he is paying good money will maintain their value in fair competition. An exhibition under the direction of a reliable society is a good test. Belgians judged in such places, with full publicity and criticism, are

more reliable than those judged when not in competition.

The Belgian hare associations will do their most important work in the registration of judges and pedigrees. The stricter the discipline and the surer the punishment, the more reliable will both judges and pedigrees become.

Do not be fooled by pedigrees, and do not be guided wholly by them. You would not feel cheerful to pay quite a sum for a wonderful pedigree, and find on getting your Belgian from the express company that it was a sickly animal which had contracted disease since the recording of its pedigree. Remember that you are buying an animal, as well as a pedigree. Moderate-priced Belgians give far more satisfaction, as a rule, than the fancy pedigreed. It is best to buy a doe (female Belgian) of fair score which has been bred to a buck of high score, than to buy a pair of fancy Belgians at a great price.

Get a fair foundation and trust to yourself for improvement.

You can improve your stock at any time by sending one of your best does away to be bred to a prize buck.

Don't figure that you will put $100 into a doe and $100 into a buck, and that in six months you will have forty Belgians worth $100 apiece. Such reasoning may look all right on paper, but it is misleading.

Start with as good stock as you can afford without using up all your resources. Leave a little money for emergencies. Use ordinary business common sense. If you have only $10, and feel that you want to start, it is better to buy two bred does at $5 than one at $10. In the course of a few months, you will be able to sell meat stock enough to pay for a fancy buck or the fee of breeding a high-scoring buck to your best doe.

If the Belgians which you have bought have been exposed during shipment to extraordinary variations of weather, or if they were shipped by unscrupulous dealers, they may have the snuffles (otherwise known as catarrh, or influenza) when they arrive. If they are running at the mouth, they have the slobbers. If either nose or mouth is running, or the animals are sneezing, or refusing food, turn over these lessons until you come to the one on diseases, and you will see how to treat them. Belgians shipped by reputable dealers have neither the snuffles, slobbers nor pot bellies. If your purchase shows any bad symptoms, give the dealer the benefit of the doubt and by careful feeding for a few days strive to cure, meantime writing the facts to the dealer of whom you purchased. As a rule, Belgians which are healthy when shipped will remain healthy.

The express companies have no difficulty in handling them. The shipper sends a bag of oats and hay with the box to the express company and during the journey the express company's employes feed and water the animals.

Do not be frightened if the does have a little dewlap, in some cases. Such does, it is found, make good mothers. The body should be long, and the back should rise in a well-moulded curve. The white belly should be well up, not pot or fatty, and the animal should have the clean lines suggestive of the thoroughbred race-horse. The startled look of the eyes is characteristic. The eye should be bright and bold.

When you have ordered your stock, and are awaiting its arrival, you ought to be getting the box or hutch ready, and this will be the subject of our next lesson.

LESSON FOUR.

——How to Shelter——

Fundamental Rules—No Such Thing as a Self-Cleaning Hutch Some Hutches Are Easier to Clean Than Others, but Industry is Essential to Cleanliness—It is the Urine and Not the Dung Which Will Give Odor if Neglected—How to Make a Hutch Out of an Empty Barrel—Simplest Pattern of Hutch to Cost $1.60—Need of Ventilation—Belgian is Hardy and Artificial Heat is Not Needed—Importance of Keeping Out the Winds and Snow—Hay Rack and Drinking Dishes—Latter Should Be of Porcelain—A Cheap Disinfectant—Object of a Hurdle—Sunlight Desirable, but Not the Hot Rays All Day Long.

BEFORE your Belgians arrive, make ready a home for them. The interval of time between ordering and the receipt of the animals can be employed to good advantage in building a box or hutch.

There are certain fundamental rules which must be followed, and observation of model rabbitries will convince one that the best breeders are agreed on a simple form of hutch for a unit which may be multiplied as many times as desired as the Belgians increase in number.

Do not be deluded into believing that you can invent a hutch that will be self-cleaning, or one that will do away with attention in the matter of cleanliness. Some amateurs have planned a hutch of a so-called self-cleaning pattern, the chief characteristics of which are, first, a wire screen on which is laid the hare's bedding, and, second, a zinc-lined drawer immediately underneath into which the urine percolates and the dung falls. In practice, it is found that it is as much trouble to keep the zinc-lined drawer sweet as if the hare sat in the drawer, and besides, the animal's hocks are liable to become sore through contact with the wire screen.

Bear in mind that it is the urine, and not the dung, which if neglected, will give rise to a foul odor. The dung gives little or no trouble. When the Belgians are in their ordinarily healthy condition, it is hard and may be removed without difficulty. A thin layer of sawdust or dry sand, for the bottom of the hutch, under the bedding, is best, to absorb the urine. It will be found that the animals will use a certain corner of the hutch, and efforts for cleanliness should be directed more particularly to this corner.

A hutch may be made out of an empty barrel. For a make-

shift, at times, this barrel hutch may be easily arranged and will be found convenient. The barrel should have one head solid, the other open. Lay it on its side and raise it a foot or more from the ground by placing cradles at front and back, or by propping it up securely. To make the door, take a hoop from another barrel, fit it so that it will be a little smaller than the open end of the barrel, and tack across it wire netting, mesh not larger than one inch. Cut a strong piece of leather for the hinge and tack it at the top of the hoop and opening. Another piece of leather, with a nail, may serve as the fastener, placed at the bottom of the hoop and opening. Nail two cleats to the inside of the barrel, about one-third the way up, and on these lay a light flooring, say one-half inch thick. The better the fit you give this flooring, the less trouble the barrel-hutch will be to care for. Make sure that the urine does not leak through the floor and form in a pool in the belly of the barrel. If there is any disposition of the water to gather there, a hole should be bored in the under side of the barrel. Used outdoors, such a hutch will not give a great deal of trouble, and is much to be preferred to the cramped, poorly-ventilated quarters which some beginners force their pets into. Except for young stock, however, unless it is a large barrel or cask, it will be found too small.

A safe size for any hutch is two feet high, two and one-half feet wide and six feet deep; or, if the broad side is at the front (it is a matter of choice) two feet high, six feet wide and two and one-half feet deep. That gives room enough for the inmates to move about freely and take exercise, and provides space for the nest-box when the doe is ready to kindle. A dry goods box of this size may be fixed over to suit. The door should be of one-inch mesh wire netting and should be fastened so the Belgians will not push it open and fall out.

No matter what you provide or build, be sure it is off the ground, so as to keep out dampness, and have holes in the top, or at the tops of the sides, to let pure air in and bad air out.

The following pattern of hutch 2x2½x6 feet is the simplest. It is of boards half way up the two ends and back, and wire above the boards. The nest box is in one end, size 12x12, the width of the hutch, with wire in front over nest box. The gate fills the entire balance of front. To build the hutch, cut two strips 1x2 inches, 6 feet long. Next cut flooring 2½ feet long. Lay strips on the floor and nail flooring to them, ripping last piece so that floor will be just six feet. The strips

should not be flush with ends of flooring by one inch. Next cut one piece of the ½x12 inch six feet long for back and two pieces of same 29½ inches long for ends. Nail the six foot piece to the two end pieces, being careful to have the bottom edges flush. Next lay this down with bottom edges up, then put floor on same, bottom up and nail, turn over and set 1x2 inch posts 22 inches long in each corner. Then shim out the posts flush with back and end boards. Next put 1x2 inch strip clear around top, mitred at corners and nailed to posts. Next cut a piece of ½x12 inch stuff 29½ inches long for top of nest box, and one 21½ inches long for side of same. In placing, have ends flush with front (and cover against end posts) which will leave a crack one inch for ventilation to nest box. Set a post at corner of nest box 1x2 inches, sawed square at each end and nailed from top to bottom. Use one-inch meshing wire twelve inches wide. At end opposite nest box, use a detached piece lightly tacked. For balance requiring the same width, one piece can be used. Make gate to fill balance of front of 1x2 inch strips and 24 inch wire. Make door to nest box of ½x12 inch stuff. Hutches should be made in pairs by placing nest boxes in opposite ends. Place two hutches six to twelve inches from floor with ends together, then two on these, and two more on these, and so forth. The top pair only will require covering with wire. Two hutches can be thrown into one by removing wire at adjoining ends, leaving a hurdle in middle. A carpenter will readily understand these directions. and if he builds them, they will cost about $1.60 each—$1.20 for material and 40 cents for labor.

Belgians may be kept out of doors all the year round, except in places where the thermometer remains below zero for days at a time. In winter it is necessary to give them plenty of warm bedding. In the Northwest, does have kindled in the coldest days of midwinter safely. The Belgian is a hardy animal. If a poultry house is used, or an upstairs room, do not feel obliged to provide artificial heat, no matter where you live. Cold is not harmful, so long as there are no draughts. The sides of the hutch always should be closed at the bottom, if they are open at the top, so that the occupants will be protected. In winter, a strip of canvas or carpeting hung over the wire front of the hutch, to keep off the winds and snow, will be found ample protection.

There should be a rack in each hutch for hay, and a feeding trough or dish, and water should be given in crockery dishes.

Do not use tin dishes for drinking water, except when shipping hares (when they are in use only a short time).

The hutch should be cleaned and disinfected often, and regularly. A common and cheap disinfectant may be made by mixing a little Sulpho-Napthol with kerosene, and spraying the mixture on the floor and sides of the hutch.

The object of a hurdle in a hutch is to give the Belgian something to jump over so that its shape will keep racy and hare-like and its flesh "trained down."

Set the hutch in a dry, cool place. Sunlight at certain parts of the day, but not the hot rays all the time, will do no harm.

LESSON FIVE.

——Experiences in Sheltering——

Outdoor Hutches Made of Ham and Bacon Boxes—No Need of Sloping Bottoms—Hutches in Double Tiers of Toy Boxes—How to Arrange the Kindling or Nest Box—Badly Ventilated Hutches Cause Snuffles—How to Keep a Hutch Sweet—Ventilation Should Always Be Above the Head of the Belgian—How a Poultry House Was Remodeled—No Trouble in the Coldest Weather—Cut Fur from an Old Pelt to Give Doe for Nest—Light, Air and Ventilation Absolutely Essential to Health—How Foul Air "Banks Up" in a Poorly Arranged Hutch—Dry, Moderately Dark Houses Found Desirable—Cold, Crisp Weather No Reason for Keeping Bunny Indoors—Change Hutches at Least Once a Week—Pure Water in Clean Dishes Essential—Wash Feet and Hindquarters if Irritated by Ammonia in Urine—Hutches Made of Packing Cases, and with Curtained Fronts, Which Are Found Ample Protection Outdoors in Winter—Snuffles from Too Close Housing—Belgian's Coat of Fur Adapted by Nature Periodically to the Climate.

No. 101—"My hutches (outside ones) are simply ham or bacon boxes. I use whole ones for my breeding hutches, and divide into two compartments, by means of a partition, for the use of two single inmates. I make my doors of solid one-inch matched flooring boards, and bore a row of three-fourths inch holes opposite the top of each compartment, in order to allow each occupant as much fresh air as possible. I place the ventilation holes at the top of the compartments so that the air will go in over, instead of at the inmate. For inside hutches, I simply build or partition next a wall. I allow each adult rabbit not breeding 36 inches by 20 inches, and 20 inches deep; for youngsters, five or six together, 36 inches by 36 inches, and 20 inches deep, and for breeding does, about the same extent. I do not use either false or sloping bottoms, but simply plain, smooth, pine ones. I provide my breeding hutches with nest boxes, of which the following are the dimensions: 15 inches long, 6 inches wide and 6 inches deep. By doing this, I can take the nest box out of the hutch bodily, either to examine the young ones, or clean the hutch out, which neither disturbs the old nor the young ones."

No. 102—"It has been considered by many ignorant people, not belonging to the fancy particularly, that any kind of

hutch, situated in almost any unhealthy corner, is good enough —which, in course of time, turns out to be a great mistake. It should be remembered that human beings enjoy better health when their homes are made comfortable, in airy localities, and with plenty of ventilation; and this rule applies to the proper hutching of rabbits. I keep my rabbits in an outhouse. My hutches are in double tiers and are made of boxes in which toys are packed. I prefer these to bacon boxes, which are generally saturated with fat and salt, while toy boxes are made of good, clean wood and are free from unpleasant smells and dirt. These boxes are of various sizes, and if the fancier prefers to have his hutches made fixtures, he cannot do better than buy the large size toy boxes, which he can cheaply utilize. My hutches are movable. For single rabbits, a box measuring 4 feet 10 inches long, 3 feet 4 inches high and 3 feet wide, can be divided by a wooden partition, and this would give sufficient room for two rabbits not used in breeding. The hutches for breeding are of the same dimensions, but without a division; and inside of these hutches I put a small box for a kindling box, while I have others of them with a little divisional breeding compartment at one end. But I like the former plan, because when you want to examine the litters of your breeding does a movable box is more convenient, as it can be lifted out of the hutch without much annoyance to the doe. These hutches have small-sized wire netting fronts, with one end fronted with wood, in order to make them a little darker opposite the breeding box. When hutches of this description are made, they should be well white-washed inside; and after they have got saturated with excrement, the floor should be well washed with hot water and carbolic acid, and kept empty for a few hours until the odor of the acid has evaporated, when the hutch will be sweet again for the little tenants. The fancier should always place his hutches so that the north and east winds will be avoided, and to escape all draughts. In the winter, I have light wooden shutters, to reach within 6 inches or 8 inches of the wire-door top, sufficient to give plenty of fresh air; and an old sack may be nailed over the open part in any severe weather, taking care not to exclude the fresh air, which is highly necessary to promote health in the rabbitry. Badly-ventilated hutches are very injurious, and where too many rabbits are kept together the effect is fearful. I have known snuffles, or influenza, to arise from this cause, and the young fancier has been at a loss to know the reason, and in

many cases rabbits have died by the score. Exposure to cold will bring on this troublesome disease, but rabbits kept in ill-ventilated hutches suffer the worst. I must not forget to remark that when any rabbits begin to creep out of their nest, I always fix a piece of thin wood inside the front of the hutch, and about six or eight inches high, just to prevent them getting through the wire meshes, or getting their heads fast, and hanging themselves. Finally, let me particularly advise young fanciers to give their rabbits plenty of hutch room and keep them clean, and, above all, let them have plenty of ventilation, for the latter is the grand secret of health in the rabbitry."

No. 103—"To insure the health of the rabbits, hutches that are placed in so close a position as to destroy all chance of a free current of air passing through them, should be so arranged that they can periodically be brought into the open air for a few days, and, if necessary, purified with an application of limewash, to which a few drops of carbolic acid have been added. If the hutch be one of a stack in an inside rabbitry, and is what may be called a fixture, then other means should be resorted to in order to make it properly sweet. Many things have been tried as purifiers and disinfectants, and perhaps those in the form of powder are among the best, although the liquids and carbolics are very useful, except that they add to the dampness of the floor for the time being. But if the rabbits are placed elsewhere, as they ought to be, until the hutches are dry, the objection will be removed. When the floors are washed with a solution of lime and water, and allowed to dry, they are then ready for use. Burning brown or any coarse paper in the hutch once a month will do much to remove any impure smells. There is no reason why any rabbitry should not, with due care, be as free from disagreeable smells as any well-arranged stable in the care of a competent groom. After a hutch has been cleaned, a sprinkling of pine sawdust, which contains much turpentine, is useful, and acts as a disinfectant, to a certain extent. If the rabbits are kept in outside hutches, care should be taken to give them a south aspect, if possible. As previously mentioned, shutters for use in the winter weather must be provided, and ventilation, which should always be above the head of the rabbit, must not be forgotten. The roof should be well slatted and pointed and it should project three inches at both front and back, as warmth is of great importance, and perfect protection from cold winds

must be secured. The projecting eaves greatly shelter the inside of the hutch from driving rain and wind."

No. 104—"When we started in the Belgian hare business. we began in a small way one spring. When fall came, we had between 30 and 40 hares cooped up in covered wire runs, each about 12 feet square and three feet high, with a box inside about two feet square that could be used by hares when stormy, or by the does for nests. Later in the fall, as it began to grow colder, we were rather perplexed as to what kind of a rabbitry it was most advisable to build in which to winter the stock. We finally remodeled a poultry house in the following manner: To begin with, the house was 21 feet long, 8 feet wide, 5 feet high at the front, 7 feet high at the ridgepole and 6 feet high at the back; the board floor a foot from the ground, and the door at one end, next to back. We took the boards off the five-foot side and covered that side with our inch-mesh wire. We then made a second floor 2½ feet above the one already there. This second floor ran the length of the house, was 4½ feet wide and was made of matched boards. We partitioned off the two floors we now had and made 14 pens, seven on a floor, each pen being 4½ feet deep and three feet wide at the open wire front, and 2½ feet high. The partitions between the pens were boarded up for about a foot, and th rest was covered with one-inch mesh wire. In back of these pens we had left a space running the length of the house and 3½ feet wide, where we could keep supplies. The doors in the different pens were made of a framework covered with wire. These doors were 2½ feet high and 3 feet wide, and opened into the alley way inside of the house. In each pen we had a nest box 12 inches wide and 18 inches long, with a hole about 6 inches square in one side. We use sawdust on the floors, cleaning twice a week, feed principally on second crop hay, oats and water, besides a few old vegetables. In this way, with an open front house, we wintered our stock, breeding the does every two months. They stood the two great storms and all the cold weather without any trouble, were never sick, and we lost only one or two very young ones. We think this shows pretty clearly that the Belgian hare is very hardy and will stand, and breed in very cold weather. We sustained no heavy losses until hot weather came, but even then we got along fairly well."

No. 105—"An inexpensive place may be provided by building a frame shed if there is no old one that can be used. A

shed 10x20 feet is large enough for quite a number of hares. I have frequently had as many as 60 old and young in one of that size. Some prefer a shed with three sides enclosed and open on the east, with a curtain to drop down when it is cold and stormy. A cheap hutch may be made by taking a large dry goods box, say about 3x4 feet, 2 feet high. Take out one side. Make a door about half the size of one-inch mesh poultry netting. Let the door come clear to the bottom of the box so as to be easy to clean out the hutch, which should be done every two or three days. Inside of this large box put a small box 12x14x20 inches for a nest box. In the back end of this cut a hole about 6 inches square for the doe to enter. This box should be put at the front of the hutch on the side not used for the door. Board up the half of the front beside the door with a small door into the nest box so the nest can be got at readily. Give the doe plenty of good, clean straw about two weeks before she is due to kindle. She will build her nest with the straw and line it with fur pulled from her own body. Sometimes, if the weather is cold, they will not pull fur enough to keep the young warm, and they are chilled to death. After one has killed a hare for meat and saved the pelt, this can be remedied by cutting the fur from the dry pelt and putting it in the nest the day the doe is due. Many valuable litters have been saved this way. These instructions are only for the beginner with but little money to start. A fancier with ample means at his disposal can build his rabbitry and hutches to suit his fancy."

No. 106—"Light, air and ventilation are the three requirements absolutely necessary to life, vigor and health. And this applies to the Belgian hare as well as mankind. Housed in a small, dark, ill-ventilated bandbox with never a ray of God's sunshine, and most of the time rank with filth, is it any wonder that the owner spends half of his time dosing his hares to keep them alive?"

No. 107—"It is one of the fundamental principles of ventilation that air does not circulate and flow freely from point to point unless openings are so arranged as to allow free ingress of air and a free outlet for air. To make it still plainer, the air in such a hutch simply banks up in the hutch and becomes and remains foul. If any one doubts this statement, let him simply place his head inside such a hutch, well towards the back wall, and breathe the air for a moment. He will be convinced in short order. The air soon becomes foul, and as it

has no means of purifying itself by a fresh current in any direction, it remains foul all the time. As further proof of this, observe your hares in such a hutch. They lie close to the wire netting in front, and are trying to get a whiff of fresh air, which they stand so much in need of. The way to remedy this is to cut off the back wall of your hutch about four inches down the back, beginning at the top and cover opening with wire, or arrange a door to swing down from top of hutch so it can be opened. As a matter of fact, it should remain open all the time. If the hutches are made of chicken wire all around, this objection does not hold. If, however, your hutches are made open all around and are exposed to cold, raw winds in open rabbitries, a fine crop of colds and pneumonia will be the result, and a full graveyard will be the outcome. Another objection to open rabbitries is the strong sunlight. Hares do better in dry, moderately dark houses, where they do not get much light. The other method in vogue is the closed building, with hutches arranged to suit varying conditions of weather. These buildings should be arranged to suit the climatic conditions where the rabbitry is located. In the warm climates a building with good height if ceiling (ten feet is none too high to afford good ventilation), with a double roof (with air space between roofs) for free ventilation, without direct draughts, is the ideal home for the Belgian. Take your windows out of rabbitry entirely in summer on south side and east of rabbitry, replacing them with strong wire screens (not fly screens, but heavy screens such as banking rooms use) and these will admit plenty of fresh air, and keep out dogs and burglars. Then arrange outlets on the side walls near the ceiling, for the foul air. Remember, warm foul air rises, and if you get the currents of air going in the right direction, you will always have fresh air, without draughts. Place the hutches out of the direct current of air, but where the air will sweep around them, and your bunnies will take on new life, and be as happy as clams at high tide. The same kind of house is applicable to the cold climate, with the addition that walls can be lined with paper in very cold weather, to keep out severe cold, but still arrange for ventilation even in cold weather. Belgians enjoy cold weather, even a temperature of forty below, if kept in a dry, warm place, out of cold winds and rain. Make your runways partly outdoors and partly indoors, with a sliding door to close nights and other times when necessary. Hares enjoy a run on the snow as much as the historical small

boy, and cold, crisp weather is no reason for keeping bunny indoors, if the weather is dry, and not rainy. As to the hygiene of the hutch itself, there is a chance for great improvement. For the hutch made with a flat floor, straw as litter is best for warm weather, because bunny loves to brush the straw one side and stretch himself out at full length on the bare floor. it is cooler and he enjoys it very much. For winter, on the flat-floored hutch, a layer of clean sawdust with straw over that is the best. The droppings fall through the straw, and leave a clean, dry place. The sawdust alone soon becomes wet and dirty, and the animal is compelled to walk and lie in this dirty, wet litter. Change such hutches at least once a week. Take the hare out. Clean out thoroughly. Scrub it out with soap and hot water. Allow it to dry thoroughly, and then sprinkle some good disinfectant all over the side walls. Pure water is essential. Hares are great water drinkers. Have a nice, clean pail for watering your hares. Do not use the slop or mop pail to water them with and then wonder they are sick. Take your hares out of the boxes occasionally to see if they are ailing in any way. Sometimes their skin gets dry and harsh and hide bound. Give them a little linseed meal once in a while as a tonic, to improve their coat and tone them up generally. Rub them down, and see if their fur is smooth and their skin in a healthy condition. Sometimes they sit in the wet straw and their little feet and hindquarters get irritated. Wash them off, and keep them clean."

No. 108—"We secured a large number of packing cases from the merchants of our city free of charge; the business men seemingly glad to have them taken out of their way. Of these boxes we used only the largest for hutches, 3x4 feet being the size preferred, tearing the smaller ones to pieces and using the boards for roofing. After knocking out the front side of the box, a board one foot high was nailed along the top edge, and extending upwards. Boards were nailed to this, slanting back to the rear of the hutch, and this roof was covered with tar paper, the roof boards being allowed to extend out from the hutch about one foot, both front and rear. This gives you a splendid tight roof for shedding the rain, and also a large air space between the two roofs. For the door, we secured pine strips 1x2 inches and made a frame over which was stretched one-inch mesh wire. This door is hung with common strap hinges, and fastened with a button. Each hutch is also supplied with a heavy oiled muslin curtain, for cold or

stormy weather, which is fastened with buttons and can be rolled up and fastened under the roof with a strap, similar to a carriage curtain. For the nest boxes, we used the smaller boxes gathered in our trips, such as those used for crackers, shoes, etc., about 12x18 inches, and a foot high. A board ten or twelve inches high, sawed from opposite corners, and nailed to the edges of the box, gives a nice slant. Near the top of the box proper are fasetned cleats on which a false roof rests, and in cold weather this space between the two roofs is packed tightly with hay or straw. The cover is made large enough to extend over the nest boxes two or three inches, and extends up under a one-inch cleat nailed to the hutch, to which it is hinged after being covered with tarred paper. The hutches are all provided with buttons, fastened to the side, for holding the feed and water dishes, and we find that this saves considerable in the cost of feed, doing away with the loss necessitated by loose dishes being tipped over and the grain scattered in the litter For feed boxes we use cigar boxes, the shallow kind, and for water a small square baking tin. A small tin box, such as is used for high grade smoking tobacco, is nailed to the wall of each hutch and kept filled with rock salt. Our hutches are all made after this plan, and to say that we are well pleased with them is to express it mildly. In my mind, they are fully equal to the high-priced house, and in some ways far superior. It is a well known fact that Belgians will stand cold far better than heat, and with its curtained front this hutch is plenty warm enough for the most severe weather, and the double roof, with the air space between, gives a fine circulation of air continuously during the hottest days of summer."

No. 109—"It is quite plain to me that Minnesota breeders are too fearful lest their animals take cold, and are altogether too precautious about a little fresh air getting to them. I find doors at the rabbitries nearly closed all the time, all well as the windows, and one would think from the way a draught, however slight, is feared, that they were expecting a draught from Greenland would creep in upon them at any time if an opening were left. While we believe a certain amount of care should be given to Belgians on their arrival from the coast, yet the difference in climate is not so great as to necessitate the extreme precautions which we find everywhere. No wonder there are snuffles and sneezes, for where they are housed so closely the least draught causes them to sneeze, the same as an

infant that has been cared for in the same way and suddenly gets a breath of a nor'-west breeze. The sooner the breeders get the idea of the Belgian being a fur-bearing animal and not of necessity requiring a blanket at this season of the year, and begin to give them lots of air, in fact, better have a number of runways out doors, where a number can be put each day, the better prepared they will find their stock to stand our coming winter. We always have plenty of winter, and the idea of having pampered your Belgians to such an extent that our summer weather causes them to take cold if exposed in the least makes us smile when we think how they will shiver and shatter their teeth a few months later. Do these breeders presume to think they are going to provide artificially heated quarters for their Belgians this winter? If so, I want to discourage this idea in every possible way. Isn't it ridiculous to suppose that a fur-bearing animal whose fur fulls, or sheds, according to the season, should require an artificially heated place of habitation in the winter time? You will find that they will not thrive nearly so well under such conditions, as those who have houses, or hutches, built on a plan suitable to the winters we always have. Mark my prediction that an artificially heated rabbitry will be as conducive to snuffles and sniffles as a hen house on the same plan is to roup and swelled head, or similar diseases, because the fowls are made tender and subject to every little draught that creeps in upon them by being kept under conditions that are not natural."

LESSON SIX.

——How to Feed——

Belgians Have Gnawing, and No Grinding, Teeth—The Fundamental Rule in Feeding—Secret of Successful Feeding—Green Food Does Not Mean Wet Food—Test of Proper Food is the Appearance of the Dung—Feed Twice a Day—Belgians Do Not Care to Eat All the Time—Evil Effects of Too Much Green Food—Do Not Feed Frozen Vegetables—Neither Starve Nor Overfeed—Does in Breeding Must Not Be Allowed to Grow Too Fat—Feed Should Be Cleaned up at Each Meal—How and When to Give Water, Milk, Linseed Meal, Peas, Oats, Carrots, Hay, Potatoes, Brewers' Grains, Bran, Rice, Salt, Flour, Cabbage, Wheat, Oatmeal, Lettuce—How to Make a Good Condition Powder—Variety of Appetizing Food Will Result in Improved Condition.

BELGIANS have incisor teeth, and no molars nor grinders. They will eat almost anything in the way of field or garden stuff, green or cured.

Here is the fundamental rule in feeding:

Give plenty of hay and good oats daily, together with some green food.

The secret is, to balance the cured with the green food so that no trouble results. You will find some breeders of limited experience objecting to green food, but it is the abuse, not the use of green stuff that makes trouble.

Green food does not mean wet food.

By green food is meant uncooked or fresh-gathered stuff, such as carrots, celery, beets, turnips, turnip tops, cauliflower leaves, dandelion leaves, parseley tops, green clover, weeds, etc.

Wet food of any kind, except damp meal mixtures (fed warm or cold) are poisonous. If you cut fresh hay, clover or garden tops, or fresh feed of any kind, be sure it is dry when you feed it. Don't have a particle of moisture in it. Let all the dew and rain evaporate before you place anything inside the hutch.

The test is the appearance of the dung. If it is hard and comparatively odorless, everything is well with the feed. If it is soft and foul smelling, there is too much green food.

Fall back solely on oats and hay when the condition of your Belgians gets off, and feed the meals and brans which you will find described later on.

Feed twice a day, night and morning. Do not throw in food every time you go to the hutch. Place the hay in the rack,

giving enough to last two or three hours. Give oats in the proportion of one handful to each. Belgians do not care to eat all the time. After the morning meal they will rest quietly until late in the afternoon. Give the second feed between 6 and 7 o'clock. Sunrise and sunset are good feeding times. Some breeders feed three times a day, but the great majority advocate two. It is less trouble to feed two, and the nature of the animals is to need rest through the day, especially during the summer months. They suffer on hot days. When evening comes they become frolicsome, the mother feeds her young, and they exhibit all the characteristics of twilight prowling animals.

Too much green food will cause slobbers, and pot belly.

Don't feed frozen carrots, beets, cabbages, or other frozen vegetables. They are sure death to young Belgians.

For meat, feed oats in the morning and a mixture of four parts corn shop to one part bran at evening.

Don't overfeed, and don't starve. It is better to give them too little than too much. You can tell by watching their appetites.

Does in breeding must not be allowed to get too fat, or their littering will be a failure. Hay should be kept from them for two days before they give birth to their young.

Pea vines, including the pods, are relished, and are healthy. Pea vine hay can be raised anywhere, and where many Belgians are bred it is a sensible and cheap food.

Don't feed so plentifully that the bottom of the hutch will be littered with scraps. The Belgians are dainty and will not eat food that they have stepped on or befouled, or which has been allowed to remain in the hutch. Before each meal, clean out the old food, and let the new supply be fresh and appetizing.

WATER—Clear, cool water is never harmful. The dishes should be rinsed and filled with a fresh supply at each feeding time. A dish of cold water is a preventive and cure of diarrhoea, in nine cases out of ten. A little nitre added to the drinking dish is an added help in diarrhoea. Give the drinking dishes a thorough scalding and drying once a week, and use earthenware dishes. Always keep plenty of water before the doe at kindling time, or she will destroy her young to allay the intense, gnawing thirst which comes upon her at this time.

MILK—Bread and milk is a good dish for nursing does, but it should be fed sparingly. Avoid the plentiful feeding of

milk to all Belgians, young or old. Young Belgians fed on milk from cows that are on a diet of ensilage will be attacked with diarrhoea and die, usually within two days after the diarrhoea begins. Be careful of the quality of the milk at all times and let the dish containing it stay only a short time in the hutch, so as not to absorb foul odors. Milk takes up foulness quicker than water. Scald and keep scrupulously clean all feeding dishes used for milk.

LINSEED MEAL—An excellent condiment is made as follows: Take one pound of linseed meal which has been crushed in its own oil and mix it thoroughly with eight pounds of any other good meal, say barley or corn, together with one ounce of gentian, one ounce of nitre and two ounces of aniseed. Mix with water into thick, damp (but not sloppy) paste, and feed twice a day, giving each time as much as they will eat, removing what they leave as soon as their appetites are sated. This condiment is a tonic, makes their coats glossy and smooth, clears their kidneys, produces milk and gives a good appetite.

PEAS—Uncooked peas are a good flesh-producing food. Use always the gray peas, not the white ones. The dung of Belgians fed on white peas is pasty and foul. Continued use of the white peas will result in diarrhoea. The gray peas should be covered with water for a day and a night, then rinsed with fresh water, drained and set away to remain until they begin to sprout. Then they may be fed, a handful to each Belgian, night and morning.

OATS—These are a staple article of diet. For young Belgians they should be the crushed variety, so as to be more easily assimilated.

CARROTS—An excellent food. They are fed uncooked. They are especially good when the doe is suckling her young, as they aid the secretion of milk.

HAY—Clean clover, or timothy, or alfalfa (common in California, Texas and the Southwest) are good foods. Put a bunch in the hay rack night and morning. Do not use hay for bedding, if you have sawdust and straw.

POTATOES, potato parings—The potatoes must be well boiled in every case. Do not feed raw potatoes. The water should be thoroughly drained out after boiling. Mix the damp potato, crushed, with parings and Indian meal. Feed not oftener than once every four or five days.

BREWERS' GRAINS—Thoroughly dry them and mix with

meal of some kind. The sugar in them helps to fatten. Don't feed too many, or they will sour on the stomach.

BRAN—Use little of this, as it does not have much nourishment. It may be mixed with meal.

RICE—Should be boiled and allowed to stand until it is cold and with the least amount of moisture—dryer than when used on the table. Should not be fed more than once in ten days. Some Belgians will eat it, others will not care for it.

SALT—Keep a piece of rock salt hung up in the hutch within reach of their tongues, or on a little shelf in a corner, or in a small box. Occasionally soak their oat and meal foods in salty water.

FLOUR—Mix a little with meal food if bowels are loose.

CABBAGE—Green, uncooked leaves fed now and then are relished. Do not feed too much of it.

WHEAT—Crushed wheat is a safe food.

OATMEAL—Good food at all times.

LETTUCE—Green lettuce leaves, fed sparingly, may be used to vary the diet. Don't feed lettuce leaves after the seeds have begun to sprout on top. This lettuce gone to seed has a stupefying effect on them.

Make an effort to give your Belgians a variety of appetizing food. Their improved condition will well repay you.

LESSON SEVEN.

——Experiences in Feeding——

Green Tares a Good Food—All Roots Should Be Carefully Washed and Dried—A Good Paste to Feed Night and Morning—Cold Water a Cure for Diarrhoea—Bread and Milk for Nursing Does—Salt is Essential—Boiled Flaxseed Mash—Green Food, Except Carrots, Affects Milk of Does—A Partitioned Trough to Prevent Young Rabbits from Pushing Each Other Away—Feed No Damaged Hay or Grain—A Good Diet Table, Giving a Safe Variety—Need of a Warm Meal Frequently—Soaked Peas Do Not Agree with All Belgians—Extravagant Variety of Food Not Essential to Success—Hemp Seed Will Make Coats Glossy—Do Not "Coddle" Your Belgians—Red Poppy a Splendid Food—Chicory and Comfrey the Best All-Round Foods—Sulphur Needed Occasionally—Pea Vine Hay Superior to Alfalfa—Young Begin to Eat Food in About 2 1-2 to 3 Weeks—Excess of Cabbage, Lettuce and Turnip Tops to Be Avoided—Avoid All Sloppy Foods—Success in Feeding Only Once a Day—How to Prepare Bran with Corn Meal—How to Prevent Waste of Food—Best Food Not the Most Expensive—Real Secret of One Breeder's Success in Feeding—Green Food Entirely Avoided in One Case, but Fed Plentifully in Another—Rules of a Leading French Breeder—A Porridge to Offset the Use of Too Much Green Food—Excess of Dry Food Harmful—Young Rabbits' Teeth Not Strong Enough for Whole Oats or Barley—Amount of Corn to Give Young Rabbits—Apples and Pears Not Advisable for a Regular Food—Southern Black Cow Pea Hay Used with Success.

No. 200—"I keep mine upon the best food obtainable, namely, oats, sweet hay, dry clover, swedes, carrots, sprouted gray peas, sow-thistles, dandelions, green tares, and I consider the above by far the best of all kinds of food for rabbits in every variety. Swedes never scour (produce diarrhoea); carrots are capital diet for improving the condition of the fur, producing a silky, glossy appearance to the coats, and should be given sparingly when moulting or shedding the fur. Does, in a few days after eating sprouted peas freely, will be ready for pairing. I like sow-thistles for does and young ones, as they contain a quantity of juice or milk. They should be given two or three times daily, fresh and sparingly. Green tares I highly approve of, for milch

does and their offspring especially, and I consider that, provided they are fresh, not wet, they are the best of green meat for producing nourishing milk, but they should be given sparingly night and morning, or, if possible, even three times daily. All roots should be carefully washed and wiped quite dry, or diarrhoea may soon set in. Should that appear, a dish of cold water should be at once placed in the hutch and replenished twice daily. It is a positive cure. It will cure 95 per cent. of the patients so treated. Plenty of clean sweet hay, dry clover and oats, and a little barley meal mixed with warm water into a firm, thick paste should be supplied. But no other food must be given for a week at least after the attack has ceased. The above is well worthy of every rabbit fancier's attention. I cannot too strongly recommend such a valuable remedy, as its result is the most certain known. I have spent a little fortune over my animals, and have come to a decided opinion that, except in cases of diarrhoea—when, as I have said above, water is a certain cure—ill specimens are best killed at once, as, though you may save an occasional one, you run the risk of losing many others from their taking the disease. Linseed meal crushed in its oil, say one pound, well mixed to eight pounds of best barley meal (or any other good meal) with aniseed two ounces, gentian one ounce, nitre one and one-half ounces, is my favorite condiment. Mix it into a thick paste and give it to the rabbits night and morning, as much as they will eat. It produces milk, it is most nourishing, it tends to produce coats glossy and smooth, it acts upon the kidneys, thus preventing colds, and lastly, it causes a good appetite, as it is sweet and bitter, with tonic qualities. A day or two before the does are due to kindle I like to place a pan of cold water in the extreme end of their hutch from the bed compartment, as they experience great thirst about their labor time, and will drink most freely of water, and this simple precaution will frequently prevent their eating their offspring."

No. 201—"My idea of feeding is as follows: First and foremost, regularity is of the utmost consequence. I feed twice a day—in the morning with whole oats and green food, swedes or turnips in the winter months, and at night I give meal mixed up with hot water into a stiff paste. They must be kept in a cool place, for if you keep them in a hot rabbitry they will never do well, and will be far from healthy.

I always keep mine in a cool place, out in the yard—with just a wooden covering over the top of the hutches—and where the sun cannot reach them, so that I keep them very cool."

No. 202—"Malva and green alfalfa are good for nursing does if they are accustomed to green food, but don't give too much. If the doe is poor, a little bread and milk is the best thing for her. Of course, the milk must be sweet. A nursing doe should always have a plentiful supply of clean food in her hutch. Oregon oats I prefer to any other grain, but wheat is good for a change, and so is rolled barley, but too heating in summer. Youngsters at two weeks are very fond of rolled oats or wheat, and it is very good for them. They will soon learn to eat almost everything, enjoying carrots at three weeks of age. Do not feed too much green stuff, unless they come from stock accustomed to be fed on it. After weaning them, give bread and milk if possible, for a week or so at least, and the warm morning mash and a little well cured hay. Bread and milk is certainly the best of food for a nursing doe and her young. Never let it sour in their pens. Every rabbitry should keep a cow. It would add considerably to the health and strength of the stock. Salt is essential to rabbits. It should either be given in their water once a week, or a piece of rock salt should be hung up in each hutch, so that they can help themselves if they need it, or the grain may be soaked in salt and water and then put on trays to dry before using. Some rabbits are raised entirely on malva and green stuffs, but I would not advise you to feed it to fine stock unless it is accustomed to it. It produces slobbers in the young very often. A good warm mash for Belgians is made by mixing boiled flaxseed with sufficient feed meal and bran so that it will crumble in your hand. Add a little salt. Rabbits do not like any sloppy food. Give them only what they will eat up clean. If any is left over, it should be removed before it sours."

No. 203—"I do not advocate much green food, except carrots, during the time the young are suckling, as it often affects the milk, and deranges the bowels of the young, hence so many deaths through scours. Let the young stay with the doe until they are six or seven weeks old, and let the doe rest two or three weeks to recover her strength befor breeding again, rearing and feeding. At six or seven weeks I take away my young and place them in a large

hutch, and give them crushed oats, milk and bread, barley meal paste, and carrots occasionally, until about three months old, then I allow them the same diet as the older ones, which consist of oats, carrots, swede turnips, dandelion, sow-thistle, clover, tares, hare parsley, acorns and barley meal paste mixed with crushed linseed. I always feed twice a day about 8 o'clock in the morning and the same time in the evening, and those which have not quite eaten all up get no more until the next meal. For my young rabbits I use a trough with five partitions from the edge of the dish to the cylinder, so that when they are feeding they do not push one another away, but each rabbit has just room for its own head. I also prefer a lid on the top, as it prevents the young ones getting inside and injuring themselves, and thus often saves the fancier much anxiety and loss."

No. 204—"Feed no damaged hay or grain, nothing but clear, bright hay and sound, plump grain. Don't keep old does to take up room at three years of age; their usefulness is about over. Do not feed all they will gorge of cabbage. It will bloat the old ones and give the young ones scours. Dampness and dirt is a Belgian's worst enemy. Avoid these and many difficulties will be overcome. Watch for barren does, but don't give them up too soon, some prove in the end to be excellent breeders. Do not forget to feed salt. We would soon crave it if deprived the taste of it for an indefinite length of time. Cottonwood branches and leaves are well liked by the hares, and must be beneficial. They seem to crave something bitter."

No. 205—"After the young Belgians are taken away from their mother, they require a loft or large space to run in, to enable them to stretch their legs and get themselves into that so-called hare-like form. A great many may be turned together, up to about four or even five months old; but they must be watched, or a few pugnacious ones will set the whole of them fighting, whereby many a valuable specimen will be damaged. As to feeding, I do not know that it ought to differ from that given to other varieties; but as they are required to keep racy and in muscular condition, I would suggest that, instead of much corn, a chemical food which I have lately adopted and which answers admirably, should be given, in which case you will be able to develop muscle without the usual fattiness so often noticed in exhibition specimens. Belgians require more time to develop than any

other variety; many a promising youngster is got rid of which, if kept through the first or second moult, would make a good specimen. Rabbits showing decided imperfections, such as white on legs or feet, very gray coat, void of or little ear-lacing, coarse, thick ears or any trace of white on nose, may be destroyed as soon as ready for market or the pot."

No. 206—"The following will make a good diet table for ordinary purposes, but of course it may be varied according to the resources of the fancier.

1st day: During the winter give a portion of swede turnip or a piece of carrot, and a handful of sweet meadow hay; that will do for the morning feed of one day. In the evening feed about 7 o'clock upon whole oats, if the animals be full grown or almost matured. Young rabbits, up to three months, may have crushed oats and a little bran, as their teeth are less able to masticate the hard, whole grain.

2d day: In the morning give a few oats and a little fine bran, turnip, beetroot or carrot; and in the evening give a handful of clover hay and a warm mash made as follows: Take half the quantity required of the leaf which falls from the clover hay, and scald it with boiling water, allowing it to remain in the water for about an hour; then add pollards, fine sharps, and patent rabbit food (of each one-third), a small quantity of whole linseed (which has previously been boiled to a jelly), and a small quantity of food for cattle (prepared and sold at the stores). Mix the whole into a stiff crumbly mass and give, while it is still warm.

3d day: Gray peas, soaked for 24 hours, and then laid out until sprouted, may be given on the morning of the third day. About two tablespoonfuls of these peas may be allowed to each adult rabbit at any time, but to the large varieties may be given a little more. Too many peas so prepared are injurious to health, as they tend to swell more than fatten, although they are very valuable for producing fine, short coats, if given in moderation. Evening feed, oats and a little turnip or carrot.

4th day: Morning. Again turnips or mangold, with a little bran and oats, not forgetting some hay, which, if they do not care to eat will serve for bedding. Evening (especially if cold weather). Give them a supper of warm mash made as directed for the second day, omitting the purchased prepared food, but adding a good handful of clover hay. A small pinch of flowers of sulphur for each rabbit.

5th day: This may be the same as the first.

The other days may follow in their order, or be varied, but we do not think it at all necessary that there should be a change of food every day in the week; in fact, an occasional change only will be found the best. In summer, the same system may be observed, merely substituting green food—such as comfrey, chicory, dandelion, cauliflower leaves, vetches, etc—for the roots; taking care, however, that all green stuff is perfectly dry, and that a liberal supply of hay and oats is given as well with, say, every other day, a drink of cool, clean water. In fact, in the very hot weather, water should be given daily."

No. 207—"In feeding mash I have found that to give the food immediately after mixing, and whilst in a warm state, is the more beneficial and satisfactory. After the food has become cold, as a rule, the animal does not eat it with half the relish that it does when given warm. Also, the swelling process goes on chiefly during the mixing, and what little, if any, takes place after does not do the slightest injury. Rabbits, when in a confined state, should have at least one warm meal during the day."

No. 208—"Morning, noon and evening are the best times, and I prefer giving them three meals to two. Morning meal should be some good sweet oats. At noon, a little green food, such as carrot, swede turnip, potato or apple parings, savoy or broccoli leaves. At night the same as morning, The leaves should always be got in when dry. This is the best winter food. In the summer there is a better choice, and those who are fortunate enough in posessing a garden should sow a good row or two of chicory. It grows quickly and may, if well watered, be cut four or five times a year. If the ground is required, the roots may be dug up and given to the rabbits. I have always found my rabbits do exceedingly well on this. Dandelions and sow-thistle I also like, but wild parsley I altogether discard, for the reason of its resembling hemlock, and the possibility of gathering this with it. I like sharps and barley flour mixed and scalded, or the same mixed with boiled potatoes; and I consider that linseed and some of the condiments may be used to advantage. Soaked peas require to be given very cautiously, as they do not suit all rabbits, and many valuable ones have been lost through ther use. Good oats are far preferable, and are always acceptable to rabbits. A few may be given

with every meal of green food; and to show their relish for them, I have often seen the green food left for a feed of oats. An occasional drink of milk is very acceptable, and at the time of kindling does should always be supplied with a little."

No. 209—"There has been a great deal written about feeding some fanciers recommending such a variety of food, both in green meat, corn and meal of various sorts, they seem to forget that the majority of fanciers are people with limited means and income. This great variety of food is not essential to keep rabbits in good condition. I have been in the fancy some years now, and I think I may safely say no one has been more successful than I have, and my rabbits have been fed on a very limited variety of food. My plan of feeding is as follows: I feed twice a day, morning and evening. The morning meal consists of green meat, such as cauliflower, broccoli, or savoy leaves, a handful of barley, and a piece of nice sweet hay or clover. The evening meal, same as morning. There are many other green stuffs, such as dandelion, sow-thistle, wild parsley, etc. In winter, when green food becomes scarce, I give swedes, turnips or carrots, with corn and hay as before. I am not a believer in pollards, sharps, bran, barley meal, etc. Barley meal sometimes consists of all the mouldy and fusty sweepings of the mill, and the others are very little better. These things will, if not good, put the rabbits out of sorts very quickly, and in many cases prove fatal. I can speak with some authority on this subject, having had some experience in the corn trade. A little hemp seed is very nice for them in the proportion of a pint to a gallon of corn. This will make the coat look very nice and glossy."

No. 210—"I venture to make a few remarks on the subject generally, having been a successful breeder for many years. My remarks may, perhaps, be worth reading, although my experienc may differ from many of our great fanciers. To prove my statement is not far wrong, I can safely say I seldom lose a rabbit, except a few years since, when I followed the advice of a great rabbit keeper who recommended that the houses should be kept at a certain temperature, with diets at regular times. Acting on his advice, I built a house, and kept to my instructions, but oh, what a fate was mine. I lost nearly all I bred. Old ones moulted out of season, and all my stock got in a bad, weakly state,

suffering from colds, etc. I was so disgusted that I felt inclined to give up the fancy altogether, but nil desperandum. I went back to my old system, and can now show any one who pleases a stock not to be laughed at in their rough and ready state. The first and main thing in rabbit keeping is to get good hard and healthy specimens, not those brought up in such houses, and treated as I have before mentioned. Keep them outdoors in the fresh air, with certain protection against wet and wind. They will then live and thrive on almost any kind of food given them. My rabbits have almost everything a garden produces, in season, and as much as they can eat, but to counterbalance the effects of so much green food I always give them any amount of good, sweet hay, and as much as they will eat of old, hard clover. If I find the least signs of looseness I give a little flour mixed with their evening meal, which consists of good fresh brewers' grains, and sharps or ground oats. As to feeding, my system is to feed twice a day only, between 7 and 8 in the morning, and 6 and 7 in the evening. The remainder of the day they are left quiet, as Nature intended them to be. My morning meal is whole oats as good as can be got; they are the cheapest. As soon as they have eaten enough to stay them, they have any amount of green food in season, namely, wild parsley, dandelion, poppies, hogweed (the latter by far the best of any wild food). The poppy is one of the most valuable rabbit-feeding stuffs we have. At certain times of the year I feed on scarcely anything else but that and oats for their morning meal, and grains and ground corn for their evening meal (always keeping plenty of hay in the hutches). I used to send out into the cornfields twice a week for a cartload of the red poppy. We seldom see the white about here. I feed almost solely on this for months. A great many of the fine young fat tame rabbits in the market are fed on nothing else but hay and poppies at certain times of the year. Of garden produce, I give cabbage, cauliflower and broccoli preferred, pea and bean haulm, lettuce in moderation. In addition to above, I grow a good deal of chicory and comfrey, which I consider the best all-around foods for rabbits, and all true fanciers, if convenient, should grow them largely. My winter green food is carrots, swedes and celery. I do not believe in getting up specimens for exhibition. I never make any difference in their food at such times. I take them out of their hutches in their rough

and ready state and, when I do show—which is seldom—I am not far behind those whose specimens are got up for the occasion."

No. 211—"I have found, as a rule, that rabbits will eat greedily of their food for a few minutes after it is put in the trough, and then leave it, and in some cases will not touch it again till there is some fresh put in, and from this I consider that the best plan is to feed them oftener, and give less food at a time. I feed my rabbits at least three times a day, giving for the first meal (which is about 7.30 in the morning) a handful of sweet hay and a small quantity of scalded meal. The latter is not mixed too thin, so that it will crumble, and is given directly it is made, as it warms the rabbit, and has a better tendency to fatten. For the second meal (about 1 o'clock noon) I give green food or carrots. For the third meal (at 6 o'clock in the evening, oats or other grain. The meal for the first feed is changed every alternate week, or oftener, and consists of either barley meal and Indian corn, mixed; barley meal and coarse or fine sharps (pollards) mixed; or oatmeal and bran; but these are scalded, as before stated. A small portion of sulphur is added once a week, to keep the bowels open, and prevent pot belly and scurvy, or dry rot. A little linseed meal is also given occasionally with the porridge. For green food, I prefer cabbage, lettuce, endive, parsley, chicory tops, carrot and turnip tops, carrots and potatoes. The last named are boiled, and not given too often, as I consider that they cause flatulency. Soaked gray peas are also used, but not very often. For grain I use crushed oats barley or wheat; and these, if boiled occasionally, I think have a very beneficial effect. Brewers' grains I object to, as I think they turn sour on the stomach, and thus do the animal a serious injury."

No. 212—"As the entire South is interested in Belgian hare raising, and so many inquiries as to feed and care of hares come to me by every mail, I wish to state that pea vine hay is equal, if not superior, to alfalfa. I started feeding one feed of nice, new, clean, alfalfa hay, and one of pea vine hay, with pea pods mostly matured. In less than ten days, they would eat pea vines, pods and all, clean, while the alfalfa was partly eaten and pulled about. I watched this for nearly eight weeks, and am persuaded that pea hay is excellent for Belgian hares and I believe they will flourish upon it. Now, as to the advantage of the pea vines over al-

falfa, for the South here, is the fact that good hay of any kind is a scarce article in the Southern states generally, and is very hard to get in many parts, but pea vine hay can be raised three crops a year anywhere, and one square rod will raise enough to sustain all the hares needed for a family, and is as cheap in proportion for the more extensive breeder. I am sure this information will be welcomed by all owners of Belgian hares, and those who are studying the industry, especially in the Gulf states, which, by reason of the short, wild winters, are so well adapted to the raising of Belgian hares."

No. 213—"In about 2½ to 3 weeks the young will begin to eat. Now watch that young do not get too much green food. I prefer feeding dry clover hay until young are at least five weeks old. I give them every morning, mash composed of one-half fine cut clover hay (but not mouldy), the other half oats, better rolled oats for very young hares, cornmeal and bran, in equal proportions. I put up a little bit of salt in it and mix it good. Then I moisten the whole with one-half sweet milk and one-half water, but only moisten it; do not make it mushy. This stale bread soaked also partly in milk and water, and good clover hay, is sufficient to make them grow. See that the little hares cannot run over drinking vessels, as it will kill them if they get frequently wet. Do not be afraid to feed your young growing stock oats once a day. It will make them strong. Hares do not get sick from eating oats. The trouble must be looked for somewhere else. Give your young hares freedom, that is, to a certain extent, and you will see them growing wonderfully and be healthy. When I have several does with young about six weeks old, I put about two dozen young hares in a wire run about 15 feet square, and put a long box, or hollow log, in centre, but see that rain does not get in."

No. 214—"My method of feeding is to give them, both in summer and winter, a little sweet oat straw, and they seem always to relish it right well; and then what is left does for bedding. I then give them a little sweet hay, and this they take eagerly, by way of a change. In the summer time I feed them on dandelion, grass, prickly comfrey, cauliflower leaves, common dock, parsley, chicory, and give occasionally a few sprigs of red or green sage, mixed with other green food, which has a tendency to warm and nourish them. This green food I give at midday. In the morning I feed on

whole oats—good oats, for they are the best and cheapest—and in the evening I repeat the feeding, and my does with litters I again supply with green food. The young fancier, and the old one as well, should never give an excess of cabbage, lettuce or turnip tops, unless he wishes to scour his rabbits to death. I never feed on this detelerious food, and many eminent fanciers I find denounce the cabbage diet. In the winter I give oats, soft meal of brain, Indian meal, oatmeal, barley meal and linseed meal, mixed into balls just sufficient for one rabbit. This I supply three times a week, besides plenty of good oat straw and hay swede turnips and carrots; but too many swede turnips have a tendency to scour the rabbits, and when this is perceived they should not have any more of them for a day or two, but should be supplied copiously with cold water, oats and hay, and they will soon be right. Some fanciers are fond of giving soaked and sprouted peas, but I have a strong objection to them, on account of their causing flatulence, although they are very nutritious, and quickly form flesh. Breeding does I generally supply with boiled milk and bread, in addition to their regular food, for two or three weeks after kindling, and this not only nourishes them, but their offspring. Green food, if copiously given, will never harm any rabbits, provided they have plenty of hay and good oats daily."

No. 215—"I use green food very extensively among my rabbits. I give green oats, and lints (some call them tares), when they are to be obtained. They both are grown together here, cut down and used chiefly for cattle, and I find them to answer better than any other green food that I have tried. Rabbits not only do well on this mixture, but it greatly assists them in their moult, and you may give any amount without danger either to old or young ones. I only feed once a day, and that in the evening, between 6 and 8. Besides green food, I have always standing in troughs good, sweet, sound, whole oats, together with a good supply of sweet hay and clover sufficient to last them until the next evening (during which time they are kept quiet); and no rabbits look better than mine do. I never had disease among them."

No. 216—"Breeding of the hare in Southern California has many of the advantages that breeding of poultry does, owing to our mild climate. We have no snow and freezing weather to guard against, but bunny will catch cold here

same as elsewhere. By taking time by the forelock and bunny by the back of the neck, and applying a mixture of one part turpentine and two parts coal oil, with a free use of salt, we have been able to check and subdue this affection, thus preventing its assuming its worst form, snuffles. We also feed occasionally both eucalyptus leaves and hoarhound, which are both excellent tonics and correctives, and avoid all sloppy foods, and use care in feeding green foods. Hares must become accustomed to green foods gradually, and we prefer to feed nursing does no green foods whatever. Belgians oftentimes display marked individual tastes in regard to their rations. For instance, we have one buck that under no persuasion will eat oats, while another is particularly fond of this food. California breeders feed alfalfa hay mostly, and crushed barley forms the leading ration, which the hares like very much."

No. 217—"The doe should have good, sound grain, fresh water and sweet, fresh hay that is well cured and not watery. If green food is fed it should be done sparingly. The best vegetable food is carrots. It will be but a few weeks when the young will begin to run around the box and out into the runs. They will relish the carrots. Care should be taken with the water dish. One should be used that will not allow the youngsters in their frolicking to fall in and die in the spring time of their youth."

No. 218—"When first I commenced to keep rabbits I used to feed them three times a day, and often found they had only half eaten up what I had given them. Then I tried twice—night and morning—but still found that much I had given them was left. Then I decided to feed only once a day, and have found it not only better, but much cheaper, as they in almost every case eat all up, and are ready for the next meal. Thus I have not half the waste, and the rabbits are in better condition, having more rest during the day. I, of course, do not include the does with young in this rule. I give to each doe bread and milk or other soft food (extra) each day. My general mode of feeding is as follows: At 8 p. m., a handful of best white old Scotch oats, a little green food or swede, a handful of sweet hay, and, twice a week (extra) a ball of fine sharps, mixed very stiff with well boiled linseed. This last-named mixture will prove of great benefit to stock, both in respect to health, and keeping the coats in proper order. I have also found, especially in sum-

mer time, when a rabbit is off its meat, and skulking in one corner, that a drink of cold water will often put it right. In preparing rabbits for show, give, in addition, each day, a few gray peas which have been steeped in water for 24 hours, and then taken out and dried. To the bucks you may give a good handful, but with the does you must be more careful, as the peas are very heating and if given in too great a quantity, will cause the does to pull off their fur and make a false nest, thus spoiling them for show for some time. Place the specimen you intend to exhibit in a rather smaller hutch, keep it extra clean, with a good supply of fresh hay daily. Take it out at least once a day, and give it a real good grooming, first with a rather hard brush, then with one rather softer and finish with a clean wash-leather. After keeping thus for a week, you will find it wonderfully improved, and ready to meet the keenest judge. Always be careful to give them a good feed before sending them to a show."

No. 219—"I have never found any feed for rabbits that keeps them in better health and condition than corn fodder, middlings and bran with cornmeal. This I prepare in the following manner: Take one-half bushel of bran, one peck of middlings, two quarts cornmeal. This I mix, and add two quarts to a bushel of corn fodder cut to one-half inch with feed cutter. Add a pinch of salt, and water enough to stick feed to corn stalks. I never had anything outside of this feed for eight months in the year, and never have a sick rabbit while using this manner of feeding. My rabbitry is 132 feet long by 18 feet in width. On each side of feedway, I have spaces for each pair of hares, 6x8 feet, enclosed by wire netting. My feed room is 16x18 feet, one and a half story high with a well of water in one corner of the room. I never fail to give my rabbits fresh water at least once a day. I have no trouble with diseases, and believe most diseases are caused by over feeding and improper care. Give a rabbit plenty of room to exercise, feed twice a day, see that they have plenty of clean water, and above all things keep away from them and let them alone, and you will have less complaint of sick rabbits."

No. 220—"The best way which I consider to feed is: On Monday morning, green meat, which consists of dandelions and clover. Noon, good whole oats—the best are the cheapest. Evening, maize meal and bran, about half and half,

mixed with boiling water, to which should be added a small portion of sulphur, as it will keep the bowels open and prevent dropsy (or pot belly) and scurvy (or dry rot). Tuesday morning, a few good gray peas (about a handful) which have been soaked in water for 24 hours, and then spread on a damp floor until sprouted. Noon, green meat such as chickory tops and endive, with a little lettuce (not seedy). Evening, barley meal, mixed with fine bran, and no sulphur. Wednesday morning, hemp seed. Noon, green meat, parsley tops or carrot tops. Evening, rice meal, mixed as on Tuesday. Thursday morning, barley, the very best. Noon, green meat, hog weed. Evening, a mixture of oatmeal (oats ground, not the Scotch oatmeal) and bran. Friday morning, green meat or roots. Noon, a small portion of bran. Evening, maize meal, with no bran. Saturday—this day I generally clean them out, so I only feed twice. Morning, oats. Evening, a mixture of oatmeal (Scotch), maize meal, and barley meal, with bran. Sunday morning, hemp seed and coarse Scotch oatmeal, mixed. Noon, Caucasion prickly comfrey. Evening, a mixture of barley, rice and maize meal, with no bran. I may also add that once a month a pan of rice about six pounds at a boiling, may be divided among 60 or 80 rabbits. I have found this very valuable to young rabbits, as it helps to make bone."

No. 221—"My bunnies are kept in outdoor hutches, summer and winter, sheltered alike from damp, cold and wind. They are fed three times a day. In morning, as early as possible, I give a good feed of whole oats (the best that money can buy) or barley. At midday I give them as much greens as they can eat. In winter, of coarse, in 'greens', I include carrots, swedes, celery, beet and other roots. At night, I give a meal consisting of bran, oatmeal and Indan meal, equal parts of each, and well mixed with boiling water, and give warm; or, mixed with bran, barley meal, and pea or bean meal. I give my rabbits any greens that a vegetable garden produces, with the exception of rhubarb leaves, and one other difference, that I give very moderately of cabbages, cauliflower leaves and turnip tops to my rabbits until they are four months old, but after that age they have as much as they like. I always bed my rabbits with sawdust, and I have proved (by a trial of some years) this to be, without exception, the best, cheapest, and by far the most healthful. I often give a handful of good sweet hay, old clover, or dried

lucerne to each rabbit, which they much enjoy; and I find, given this way, the hay, clover, etc., prove a cheap and good kind of food. As a change, bread and milk, given occasionally, is also very good for rabbits. The secret of successful feeding is so small that it lies in a nutshell, and the secret is this: Have large and well-ventilated hutches, in a warm and ventilated spot. Give your rabbits nothing but good sound food (whether green or dry) and feed in such small quantities that they will eat up readily what you put into their hutches, and so be eager and ready for their next meal. Anyone with common sense will see two good reasons for doing so. (1) That by giving them what they can eat at once, you do away with the sight and smell of food, thereby saving your purse. (2) That rabbits with the sight and smell of food always in their hutches (like people) lose their appetites, and therefore, by not seeing and smelling food always in their hutches between meals, their appetite increases, and they enjoy each meal. Keep your rabbit hutches scrupulously clean, give as much green food as the inmates can eat, at the same time taking great care to give such a quantity of dry food as will overrule and keep down the tendency to looseness which too much greens are apt to produce. And lastly, bear in mind this rule, that the greater variety you give your rabbits, the more they will thrive. In conclusion, I would advise all fanciers able to do so, to grow chicory, comfrey, carrots cauliflowers, cabbages, parsley, and potatoes, in large quantities."

No. 222—"Good food is unquestionably essential, but the best is certainly not the most expensive. Between the two extremes of what a rabbit will not eat, and what is best to give it, there is a wide ground for difference of opinion. The real secret lies in the fact that the conditions under which they are kept—i. e. temperature, locality and time of year—all have to be and are taken into considertion, and in their entirety form the perfect plan characteristic of the intelligent, and who is bound to be in time, the successful breeder. Rabbits require much more moisture than is generally supposed. Many complaints, such as scurf, etc., are engendered by too much dry food. The grand point to be observed is the proper portion between the two, and here I advise as a simple rule to be observed, that when green food is given, a handful of good sound hay or clover should accompany it. Much discussion has arisen as to the best green food, and my

answer to the question, 'What is the best?' is, 'That which the individual breeder finds he is most successful with.' Individually, I am a great advocate of good sound cabbage leaves. I recommend cabbage leaves because with me they have produced most satisfactory results, extending over many years. It is not that I will not use many varieties of green food used by some of my country friends, but that I cannot. Dandelion I am especially fond of, particularly for does with young, and frequently make long excursions to obtain it. I strongly recommend rabbit keepers who have a garden to cultivate chicory. When green food is scarce or bad, I give the matured rabbits, with satisfactory results, water in its place, and does in and with young, milk, with one-third warm water added; but I prefer, when obtainable, green food, for the properties it contains other than moisture. I conclude my notes on green food with the following, which does not tend to show that the peculiarities of rabbits' taste or appetite are very limited. An old doe, for the benefit of her health, was allowed the run of my yard; meanwhile, those responsible for the domestic part of my establishment threw out the whole of the leaves of a bundle of rhubarb. This was not discovered by me till she had devoured at least half, and I naturally anticipated some serious results. As she appeared all right so, in order to experiment, I let her have the remainder the day following. This was several months ago, and she is still alive and well. Nevertheless, I do not recommend rhubarb or its leaves as a diet. Of dry foods, clover stands at the top of the list, and before corn, that is, if you get the right sort. Oats should be given moderately and should not be the bleached ones. I am rather partial to the Russian oats (black husk). Too many oats rather tend to precocity with the young, and the husk is, moreover, of a very irritating character to the digestive organs. I have stopped scouring by discontinuing them. In any case, select those with thin husks. Barley, though successful with some few, I never use except when rabbits husk their oats. I consider them of too dry and heating a nature, most especially for indoor rabbits when kept in warm temperatures. Wheat is a good food, and I occasionally vary it by giving a little buckwheat. Gray peas soaked 24 hours, and strained, are also a capital food. Rice I totally object to, neither do I care for potatoes, much less their peelings. I have never yet found it necessary to follow a diet table which gives a constantly varying food, but ad-

here to the plan I have successfully adopted almost continuously since I first kept rabbits, now nearly 20 years. It has the merit of economy, and that the results attained are equally advantageous the specimens produced by me, extending over a lengthened period, are, in my estimation, abundant proof."

No. 223—"In the first place, youngsters are ready to be taken away from their mother when six weeks or two months old. The first meal should be about 8 a. m., and should consist of hay. Rabbits are particularly fond of hay, more so if it be sweet. After it has been trampled on, bunny, who is a very particular animal, will refuse to eat it; so in order to get over this, throw in just as much as will last the day. Along with the hay, in winter and beginning of spring, give the rabbits swede turnips and carrots, cut up into small pieces; in summer, give them a small quantity of green meat. Mind, I say small quantity, because we are now dealing with young stock. I do not advocate the disuse of green meat altogether, but I warn the inexperienced against giving young stock too much of it; and I reiterate what I have previously said, that if you do the effect will be disastrous. Evening feed should consist of either crushed oats or a mixture, in equal quantities, of barley meal, pollard and bran, prepared with boiling water, and of a consistency which may be understood by the use of the term 'crumbly.' Now, before proceeding further, let me say that after I clean my hutches, by scraping and brushing out of all accumulation of matter, I sprinkle the floors plentifully with sawdust, more particularly in the corners which have obtained the most refuse. (Rabbits also in this are very clean, nearly always going to one particular corner.) The sawdust absorbs all moisture, and so tends to keep the inmates comfortably dry under foot—a very important thing. Chopped straw is a very fair substitute for sawdust, but there is a difficulty connected with it, which is the inability of the majority of fanciers to obtain it. On the other hand, sawdust is equally as good, and easier to be procured. If a rabbit is seen to grow big about its belly, discontinue the use of green meat altogether for some days. Give the subject or patient plenty of exercise, and thus save its life, because, if this is allowed to go on for any long period, it terminates fatally. The poor little thing, suddenly tumbling on its back, begins throwing itself violently about, and exhibiting all the symptoms of a child taken with a convul-

sive fit. The disease does not attack an old rabbit except very rarely, when its existence finishes by a wasting or pining away. I keep my young stock until they attain the age of from four to five months in warm lofts, and they have always water to drink. The portion of my pets which I keep in hutches I give water to drink, in warm weather, once or twice a day. My modus operandi of feeding for exhibition is as follows: Morning, plentiful supply of hay, and a piece of turnip, carrot, or green meat. Evening, a mash consisting of either barley meal and pollard, bran meal, or pollard and bran in equal quantities, prepared with boiled linseed. If rabbits are fed according to the above, they will always be healthy, with a bright look about them, and withal shapely, plump, grand, and always a source of pleasure."

No. 224—"I scarcely ever have any symptoms of ailing among my pets. This I attribute mainly to my feeding. I give in the morning hay; at midday, carrots, or swedes; and in the evening, either oats or potato peelings, boiled and mixed with meal, usually given warm. They have not seen a particle of anything green for over five months. I give them a drink of water all round every day, as much as they care to drink, while I am standing by, and they certainly thrive amazingly."

No. 225—"It is now about 49 years since I bought my first rabbit, a doe. She had seven or eight young ones, and I was cautioned particularly against giving them too much green meat. I fed them on the best of food—oatmeal, barley and pea meal, with a little green meat; at three weeks old they showed signs of pot bellies. I gave them less green meat. They grew poorer and worse, and at last nearly all died. I went on for years with but indifferent success, and through the teaching of an old friend I at last found that I was starving them on the best of food, namely, feeding them against their nature, and not giving sufficient water to nourish them. I altered my course, and have had the best of success. I do not lose one a year, and a pot bellied one I have not had for years. I feed my does well with barley, oats or pea meal, mixed with pollard, wet with cold water just sufficient to roll in crumbs. I feed them with this, night and morning, and with as much green stuff as they will eat, from the day the young first crawl from their nest until I kill or sell them. They have always green stuff before them, taking away each time I feed them what is left from the previous meal; but it should not

be given wet. I as a rule get it one day before I want it, and spread it abroad, to get thoroughly well dried before feeding with it. With most rabbit keepers, their rabbits will leave anything for a bit of green meat. Mine will leave green stuff for any dry food. I lately killed a common prick-eared rabbit, nine weeks old, for a pie. The kidneys were covered with fat, and larger than those of a common wild one. Rabbits can in this way be raised to give a good profit for eating purposes. All they require is good room, not too confined for air, to be kept clean, and regularly fed according to my rule, and they will pay the keeper. Let some four rabbit keepers try this. But I must caution them against one thing —not to give their pets a lot of green stuff one day, and the next none, or they will gorge, and come to grief; but if regularly fed, and plenty is always before them, they will thrive and prosper. Do not scald their food—it is against nature; and instead of littering them with sawdust, use short, cut straw; they like it better, and amuse themselves by nibbling a bit here and there."

No. 226—"As one of the largest breeders of poultry and rabbits in France, I use this method of feeding: The dry fodder, such as hay, etc., is always placed in the rack, the grain and oats in the trough. The soup and potatoes are given in a dish. The trough and dish are kept scrupulously clean, so that the food has a good flavor; and above all, care is taken that it is not contaminated by the urine of the animal. The midday meal comes from the kitchen garden. By preference the mothers have milk producing plants, such as lettuce, groundsel, bindweed, plantain, vetches, the vine of French beans and scarlet runners, pimpernel and fennel. Parsley is also very good, but it is only given to the does weaning their young, as we know the property of parsley is to dry up the milk. Cabbage stalks should be divided and, like cabbage, given in small quantities at a time; as also should the young shoots which come from the pruning of fruit trees—the peach excepted—the vine, young shoots of the elm, poplar, mulberry, lime, nut and the willow. The roots are carrots, parsnips, turnip, cabbage and beet root. This last is very watery and cold, and should be mixed with bran or meal. All these, accompanied with oats, barley and after-grass, form an excellent and very varied food. It is good to accustom the young rabbits to eat soup; those which begin early are not affected when separated from the mother.

This soup can be made from the water in which the plates and dishes are washed, and in the water are boiled the peelings of vegetables—leeks, potatoes, etc. In the winter, to excite the appetite, I occasionally mix thyme with the dry food. The winter food being very dry, liquid must not be forgotten. Water is indispensable in the summer, also for the doe's when littering, to calm the fever, and even during suckling, which causes must thirst. When the young are obliged to be weaned before they are six weeks old, they should have milk given in small troughs which have been well scalded and cleansed after each time of using. The food should be distributed with care, attention being paid that all are able to partake of it at the same time, or some would pine. After each meal, the racks and troughs must be emptied. Should any food be left, the animals having breathed on it, would not touch it after. Potatoes must always be boiled. In a raw state they are hurtful. Wet grass or herbs, as well as that mowed or cut, and left in the sun, are bad. The most injurious herb is the red chickweed, found with the wild endive."

No. 227—"When the bowels are relaxed by the frequent use of green food, I advise the use of a mixture of meal and water, or better still, porridge made from Indian meal; and, for the benefit of those who do not understand the approved mode of making meal porridge, I will explain the manner in which I make mine. In the first place, I take a saucepan which holds half a gallon, three parts fill it with water, and place it on the fire. When the water boils, I put in it a packet of cattle spice. The meal should then be taken up and sprinkled in with one hand, while the contents are being stirred with the other. In this manner proceed until the porridge has boiled so thick that it cannot longer be stirred. It is then poured or spread out on a board or piece of iron to cool. This quantity is sufficient as a meal for 20 full-grown rabbits. Some people may say, why go to the trouble of making porridge for rabbits? These people little know that it is the least troublesome method of feeding them. I can make the above quantity in about ten minutes. During the summer months I give this porridge as the evening meal to my rabbits at least four times a week. I sometimes pour boiling water (in which I mix a teaspoonful of curry powder) over barley meal, and mix into a dry mess with bran; and this is very good as a change. Oats, and what few vegetables they

get, constitute the morning meal all the year round. For green food during the summer months, I give lettuce, endive, carrot and turnip tops, chicory, clover, vetches, celery tops, dandelion and parsley. Potato parings should never be given in a raw state, but boiled and mixed with meal they form a good and wholesome food, if used in moderation; and for winter use, swede turnips, a small quantity of thyme, fennel or peppermint, may be given with advantage twice a week, as they are good condiments, and also tend to promote the appetite, rabbits needing change even in green food. I have also plucked the wild sorrel and dried it for winter use, having found it a capital preventive against scurvy, which in some rabbitries is very prevalent during the winter months, although I can safely say that with my mode of feeding rabbits they are seldom or never troubled with this disease.'

No. 228—"I fearlessly assert that rabbits require a preponderance of moist food; that a great bulk of the diseases to which they are subject and many deaths occur through giving so much dry food. Clover I place at the top of the list, from the large quantity of saccharine matter it contains, which I have mentioned is requisite for the development of animal heat. It should be the first cut, as fine and leafy as you can get, and take care also to have it as green as possible, discarding at once any brown or heated stuff, as you might almost as well give them sawdust to eat as this. The same remark applies to hay. Middlings is one of the most essential dry foods, and contains a large proportion of bone-forming substances (5 per cent.) and contains, also, 18 per cent. of flesh forming material, of which latter peas contain the highest, 25 per cent. while in bone-forming substances, only contain 2 per cent. Care must be taken to get the right sort. Biscuit middlings must be insisted upon. The following has been for the last ten years, and is now, my method of using the above: I infer a truss of clover has been selected. I have a box that will contain sufficient for the day's supply. At the bottom is fitted a drawer, immediately above which, nailed to the side of the box, is some one-half inch mesh wire netting—in point of fact, it resembles, and is to all intents and purposes, a sieve. The clover being put in at the top, the small or heavy particles pass through into the drawer. One handful of this to three of middlings is scalded, and thoroughly mixed together—not wet, let it be crumbling—and given warm to each rabbit the first thing in the morning (the earlier the better) and a similar al-

lowance about 7 in the evening. The midday meal consists of green food liberally given—I prefer good, sound cabbage leaves, not dried up, but of course, not wet. Our country friends will think my advocacy of cabbage leaves partakes somewhat of the cockney; but experience shows that they are specially adapted to animals kept in confinement. At this time they have also a handful of clover—i. e., the does which have young, and the matured rabbits. But if the does are in young, and up to the time of kindling, I prefer them to have the same quantity of sweet meadow hay. Let them have also at this meal some oats, a very few only will be requisite. Rabbits fed as described by me will eat but few oats; and observe, when oats are used extensively, much less green food will be consumed. Now, as in their natural condition they live chiefly on vegetable diet, I contend that any food which interferes with what Nature has prescribed for them should be looked upon with suspicion, even though they are kept in hutches. With this mixture of clover and middlings, their appetite for green food is increased. The last thing at night they have a similar feed as at midday, and those that have young six weeks old have at both these meals, in addition to the oats, some gray peas that have been soaked for 24 hours in cold water and strained. I observed just now that green food should be liberally given, and I wish this to be accepted in its full sense. They will not eat too much of it. It must be continued with scrupulous regularity. It is the departure from this rule that generally produces pot belly—all today, and then none for two or three days. If by any chance you have a break of this kind in supplies, a small quantity must be given at first when you resume, increasing the supply gradually till you work up to the regular allowance. I might add, where oats are used as the staple food, a little water given twice a day will be found beneficial. I have adopted a similar plan when green food is scarce, and strongly recommend it at that time, whatever the system of feeding may be. At seven or eight weeks, does with young on them should have added to the middlings and clover one part of barley meal, which will assist the young in moulting. 'How much am I to give them each time of feeding?' some of our friends will ask. They must find this out for themselves. No rule of quantity can be given. And here I must enter my protest that rabbits are enormous eaters, and I meet it with the retort that their keepers are not infrequently enormous wasters. Of course, it is easy enough

to throw in two or three handfuls of oats and a little green food, repeating this at intervals, ad infinitum; but such feeding is expensive, and is not productive of good results. A simple rule of feeding is to observe whether any food remains from the previous meal, and if such should be the case, keep reducing the quantity given. I like to see an empty trough when I go to feed, and the rabbits come up to it when I open the hutch door. It will not be desirable to clean out the hutches of does that have young till at least a fortnight after kindling; and do not disturb the bed place till a few weeks after. Let a plentiful supply of sawdust be thrown in if the floor of the hutch is wet, which should not be the case if properly made. I generally select as a time for cleaning out just before the midday meal. Inasmuch as milk is the most important food for young rabbits, and goats' milk is especially rich in those substances essential to the development of all the properties of a fancy rabbit, there is abundant reason for rabbit fanciers cultivating goats. It is desirable to let the youngsters have some milk while still on the doe; in fact, a favorite food with a few of our breeders is a mixture of middlings, barley meal and milk, from the time the doe kindles. I prefer getting them to drink it before the morning and evening meals, commencing directly they leave the nest. Some will not take it, but those that will gain a considerable advantage. If cows' milk is used, a little warm water should be added. Continue with either as long as you perceive beneficial results derived thereby and also remember that it considerably helps more matured animals, especially when out of condition. After they are weaned, gray peas soaked for 24 hours in cold water and strained may be given them at pleasure. Give also the mixture of clover, middlings and barley meal, only particularly observe that none is left from the previous meal. Do not be afraid of green food, but let them have plenty of dry clover at the same time. It is advantageous to let them have peas as soon as they can eat. There is one disadvantage, however, attending this plan. The peas act as a stimulating food on some does, who eat them greedily. A method adopted by some is to shut her in the bed place while the young eat the peas; but does not infrequently resent this estrangement which sometimes is very objectionable. For this and similar reasons I lay great stress on giving the young milk until they are taken from the doe, and, where obtainable, that of the goat. When the young are about four months old, or even before, they

must, if kept together, be closely watched, particularly if you have two bucks occupying the same hutch; and if once separated, they must not be put together again. A buck and doe can generally be kept longer. Carrots, of which white ones are the best, may be given them when green food is scarce, but I object to many of either. There is just one word of caution that must be given as to giving gray peas. Of course, it will be generally understood of what a forcing nature they are, and therefore, should the rabbits run at the eye, or have any apparent complaint, in whatever form it may present itself, discontinue the peas at once, otherwise the disease will be aggravated."

No. 229—"Rabbits that are reared for the table should, if practicable, be kept in large quantities, loose, and not in single hutches. The months of February and March are certainly the best for breeding for this purpose, because then the rearer will have less difficulty in procuring green stuff. Supposing the young to have been kindled about the beginning of March, the strongest should be taken away about the middle of April, and the remainder towards the end of the same month. Care should be taken that when the doe is suckling they are well supplied with food, which should be soft and succulent, but of not too aperient a nature. Young rabbits' teeth are not strong enough to masticate whole oats or barley, and if grain be given them, it should be bruised or crushed until the rabbit has attained the age of two months. They should be fed with a good selection of green, succulent food, a large supply of clover and hay, and enough corn to keep them in condition; the latter should be crushed until the young rabbits are about three months old. The profit will depend greatly upon the judgment with which this matter is managed. They may be put up for fattening at any age between three and six months. When taken from their mothers, two or three litters should be allowed to run together in either a pit or shed, care being taken that it is perfectly dry, or diarrhoea and rot will ensue. The average age when taken from their mothers will be two months. It is difficult to say exactly what amount of corn should be given, but it may be stated as an average that a little under half a pint a day will be amply sufficient for young ones of this age. A peck—16 pints—should last nearly five weeks for each one. A peck and a half, then, will do for seven or eight weeks, and this will bring the young ones up to four months old. They may be fattened then, or they may be kept

a month or two. With reference to the corn for these two months, oats and barley are about the best. Let these be given alternately, either daily or weekly, and for a change a little meal may sometimes be substituted. Oilcake is very good, if you can get them to take it, but their appetites have first to be educated. Bread crusts are very good and very profitable; they can be bought almost at a nominal price, and are very good flesh producers. If very stale, the crusts should be slightly soaked, but should not be given with too much moisture in them, although, if you can afford to give milk, there is nothing better to bring them on, and in this case they may be given as moist as possible. Tea leaves mixed with the corn are also cheap and beneficial, as are also potatoes and potato peelings. An arrangement can easily be made with a baker for his refuse potato peelings, and among these will be found a good deal of the vegetable itself. Boil these and give them hot, mixed with bran. Scrupulously exclude bran from the corn trough; it is often given to make the corn go further, but it will be found to have quite a different effect. A great amount of the success will depend upon the judicious administration of roots and green stuff. Give these with a liberal hand, taking care to note any approach of looseness, and to guard against its increase; so long as your stock is not troubled with this nuisance there need be no limit as to the amount. Cabbages, lettuces, long grass, young wheat, chicory, comfrey, tares, clover, vetches, marshmallows, sow and milk thistles, hare and garden parsley carrot, turnip and parsnip tops and roots are all good, and being of a succulent nature, will entirely do away with the necessity for liquid. Green food should always be given dry. Some advocate the cutting of it a day or two before it is required; but it would be better to give it as fresh as possible so long as it is free from moisture. Apples and pears are very much liked, but are not advisable for a regular food. Hay should be given very liberally, as it will counteract any bad effects produced by too much green stuff. Keep the place scrupulously clean, and give straw or sawdust for bedding. This treatment will do nicely till the rabbits are selected for fattening; they will then be not fat, but fairly plump, and in a thoroughly healthy condition. The males should then be cut, an operation which is very easily effected, and improves both the flesh and the temper of the animal. Then place the selected ones in rather small hutches, not too many together, and commence the cramming process.

Oat and barley meal are the two best and cheapest flesh producers. Mix these with tea leaves or boiled potatoes, and give twice a day, warm; also supply well with sweet hay. Milk sweetened with a little sugar is an excellent fattener, but rather expensive, but a little now and then will be greatly relished. Select the green stuff carefully, and do not give it either too liberally or too sparingly, as the former will cause looseness, and the latter constipation, both of which, the former especially, will greatly hinder your work. If fed carefully and judiciously in this manner, it is surprising how rapidly they will put on flesh, and that of the best quality. As soon as each one is fat enough, he can be taken away and killed.

No. 230—"Here in this section (Maryland), whenever the winds bring continued rains from over the Atlantic ocean, the dampness is too much for the constitution of the hare unless comfortably housed, but through the perfectness with which Nature has endowed its mind with contentment, renders this species of rabbits capable of much confinement, for as certain as I can keep their minds contented and in a healthy condition, their bodies are sure to thrive. Thus weather cannot prevent the keeping of them; for here a house can be built which for a small amount will keep a surprising number happy and thrifty, if well cared for. One article of diet that I find to be very healthy for my Belgians, that probably many breeders and fanciers do not use, is the southern black cow-pea hay. It is easily grown, even on poor land, and can be cured so that the hay does not lose its green shade. I give my rabbits nothing but pea hay in the evening, and the next morning it is all gone—leaves, stalks, stems, pods, peas and all. The rabbits seem to be fond of eating at night, and I have an idea that they spend more time sitting out on a pile of hay chewing away with a never tireless speed than they do in dreaming."

LESSON EIGHT.

——How to Breed——

Like Produces Like—Mate Only Sound, Healthy Specimens at Least Seven Months Old—Take the Doe to the Buck's Hutch—After Two Weeks Place Doe in Breeding Hutch—Preparation of the Nest Box—How to Inspect the Young of the Wildest Does—Need of Water at Kindling Time—Keeping Intruders Out—Rules for Strangers and Strange Dogs—Do Not Meddle with Nest—Doe Will Remove Dead Young—When Does Destroy Their Young—Advantage of Several Does Littering at the Same Time—Dutch Rabbits Good for Nurses—When Does May Again Visit the Buck—How to Tell the Sex of Young Belgians—When Young Rabbits Moult—Critical Time Requiring Extra Care—Only a Very Small Percentage of Young Should Be Lost.

A FUNDAMENTAL rule in breeding is, that like begets like. While care, attention and feeding mean a great deal, it is impossible to find in the offspring standard qualities lacking in buck and doe.

Mate only sound, healthy specimens. They should be at least seven months old when mating.

Take the doe to the buck's hutch for service. Being in a strange place, she will be less liable to fight if not in season. Do not leave them together more than a few minutes. If the doe is unwilling to breed, take her away and try again next day. One good service is enough.

When the doe is two weeks along, or about half gone with young, let her be placed in her breeding hutch. Get a box about 18 inches to 20 inches long and eight inches wide, and without a lid. In one end, make a hole of sufficient size for the doe to pass through easily. Turn the box upside down and leave her to become acquainted with it. A few days before kindling she will fill it with short straw, and when her time comes will make a nest in it. It does not matter whether the breeding hutch is in one or two compartments. The young are safe, and out of sight, and if it is necessary to inspect them, it is easy to make a small opening upon what will be the top of the box before putting it in, and in this way the young of the wildest and most savage does may be safely inspected.

When the thirty days of gestation have expired (or even the day before) the doe should have a little clean water to drink, in a separate dish. An intense thirst is sometimes experienced at this time, and to possess the means of relief is often to save

the progeny, which would otherwise be destroyed. Care should be taken that the hutch is mouse proof. The more timid does are very likely, in the presence of intruders, either to neglect their young or devour them. A sudden clap of thunder will sometimes cause does to miscarry, and occasionally those with litters will be so frightened as to scatter their young about in various parts of the hutch. All strangers, when visiting the rabbitry, should do so quietly, as a sudden rush into the presence of the rabbits is sure to startle, and probably produce injurious results among the pregnant does. All strange dogs should be excluded. Well behaved dogs to which the rabbits are accustomed will do no harm.

Avoid at all times touching the nest or the young, for some does are very suspicious, and strongly object to any interference with their family arrangements. In this particular, does are very different. but it is far better and safer not to meddle.

Should any of the young die in the nest, the doe will soon remove them, generally placing them near the door of her hutch. Some young does will throw their little ones about the hutch soon after they are born, and then seem to take no further notice of them, but there is generally a cause for this, such as mice running across the nest, or some dog or cat presenting itself in front of the hutch. Such does may be tried again, and when about to litter supplied with a little water, and a clean, well ventilated hutch, with a darker portion for the nest.

Try to find out the cause of any irregularity, and if none can be discovered the doe may, after a second trial and failure, be considered unfit for keeping for breeding purposes. Occasionally a change of hutch will bring success.

Suckling does should have a liberal supply of warm milk and bread; indeed, many fanciers rarely use any other food. This is generally sufficient to bring both mother and family through the first three weeks satisfactorily, but a supply of carrots, oats, and boiled Indian meal, in the form of a paste, is also desirable at this time. Avoid any watery food, likely to derange the bowels, but a few soaked peas may be given, and will tend to restore the doe to her original strength. When bread and milk are used for does just littering, a separate dish for this purpose is better than the ordinary one for, while that for the dry food is easily kept sweet and clean, the dish for milk is liable to become sour, especially in warm weather. Dishes used for soft foods should be washed and scalded every

day, or the worst results are likely to follow.

If in a stock of does, one-third of them have litters at the same date, the same warm food may be given to all; the spare hutches should be in process of preparation for the young. Another advantage in several does littering about the same date is, that should any of them have too many young, one or two of them may be transferred to does with small litters. If it is at all advisable to do this, the sooner it is done after birth, the better. A doe may show signs of debility, and so the rearing of two or three less will assist restoration to her original strength. If any nurses should be found requisite, the little Dutch rabbits are better than any, for they are of a kind and tractable disposition, have generally an abundance of milk, and are strong and hardy. As a rule, each doe will bring up her own litters the best. Sometimes only one or two of the most promising in the litters are left with the doe, in order that they may be larger, and more fit for exhibition or stock purposes, the others being destroyed or put out to nurse. Between the 15th and 18th day from birth, the young rabbits may be seen peeping out from their nest, which in a few days more may be moved, and the hutch given a thorough cleaning. If another well-ventilated equally warm hutch is ready to receive them, it will be found convenient to shift the family bodily in order to allow the recently occupied hutch to be thoroughly cleansed and disinfected, and again made ready for use. When the young rabbits begin to leave their nest, they soon commence to feed with the mother, and when they are from six to eight weeks old, they may be removed from her. Taking away one or two of the stronger ones each day is perhaps the best plan, as this gradual removal seems better to dry up the milk; and when all the family are removed, a little salt in the does food will be beneficial, as it tends to dry up any milk that remains. With good feeding, she may in ten days again visit the buck, although a few extra days of delay are an advantage to a doe which has brought up a large litter. The young rabbits may be allowed to run together until four months old, but after that age should be separated, for they are rather pugnacious, especially the bucks, and require a hutch for each sex, and even then they will frequently quarrel and fight. In a few weeks' time it is the safest method to give each buck a hutch to himself, for to allow them to remain together is to run the risk of their injuring each other, and totally destroying their usefulness for stock purposes, The does are less

quarrelsome, and half a dozen of them may remain together until selected for pairing.

The males may be told from the females by a careful examination of their bellies. The spots where teats are to grow are distinguishable upon the female.

When from eight to ten weeks old, young rabbits pass through a moult. This is a critical time, during which they require extra care, but after that period is over they will probably thrive, with the proper attention. For the first few weeks at least, they should have a liberal supply of crushed oats, carrots, turnips, etc., will be a safe diet; and the warm mash, sweet hay, and plenty of fresh (not cold) air, must be freely given. This last is highly important, as a great proportion of the deaths of young rabbits are attributable to the want of fresh air, and to want of cleanliness and due care as to the right kind of food. Giving improper food is an error commonly committed, young rabbits being more frequently seen suffering from the effects of injurious food than from a super-abundance of the right kind. Only a very small percentage of the rabbits should be lost, except from an epidemic or a series of accidents. Young rabbits consume a great deal more food than the matured ones, in proportion to their size, and although they are constantly eating, they will not injure themselves, for they have to provide for the building up of their frames, and not merely to maintain them, as is the case with adults. Very few will suffer from pot belly if the food be good, and given in proper proportion. The quantity to be given to half a dozen ten or twelve week-old rabbits will soon be ascertained. Young rabbits are very fond of scratching their food out of the dish, and the latter should, therefore, be so constructed as to prevent such waste. There are many kinds of troughs which may be devised to prevent waste of food, and secure individual, orderly eating.

LESSON NINE.

——Experiences in Breeding——

When to Select Young Belgians—February and March Best Months for Pairing—How to Tell When the Doe is Going to Litter—Stud Book Always Should Be Kept—Length and Weight of Doe Should Regulate Time to Breed—How to Breed so as to Get Extra Long Hares—Importance of Knowing the Peculiarities of Strains—Practical Points in the Care of the Young—Dutch Does Make Excellent Foster Mothers—Good Does and the Finest Bucks the Cheapest to Begin—Bucks if Used Too Young Stop Growth—How to Deceive Does When a Change of Litters is Necessary—Sure Remedy Against Mice—Good and Bad Milkers—Reducing the Number of the Litter—How to Feed and Treat a Nursing Doe—Importance of Good Bucks—Care of Young Left to Does for Two Weeks—When Six Weeks Old the Young May Be Taken from Mother and Placed in Separate Hutches—Evils of Too Frequent Kindling of Doe—Too Early Weaning of Young Causes Slobbers—When Marking Must Be Resorted To.

No. 300—"Breeding stock should be bought with care and judgment, as on this will depend the future success of the rabbitry. The selection of young rabbits from four to six months old is advised, as they have then passed through their first moults, which are often so fatal to them. It is not desirable to pair rabbits too young, as experience shows that, when fully grown, or nearly so, they have greater strength, and the breeder gains in quantity of the progeny what he would seem to have lost in number by not having had litters when the does were two or three months younger. It need hardly be added that, the more perfect and healthy the pair is, the greater the certainty of good litters. The buck and the doe should not be together in the same hutch many minutes. For pairing, the months of February or March are the best to insure healthy stock. Yet, when rabbits are kept in warm, healthy hutches, they may litter at any time during the year, though it is not desirable. Four litters during the 12 months are ample; and if any longer time than three months be allowed between any litter, it should be during the coldest weather, when it is decidedly advantageous to give the does (especially old ones) a little extra rest. During the inclement weather of January, extra care and warmth and feeding must be given to does with young, or which are about to kindle, and

any little additional attention will be amply repaid by the health of both mother and offspring. When within a few days of the time for littering, the doe will furnish sufficient evidence of the fact by biting the straw of her bedding into short pieces, and carrying it and the hay—of which she should have an abundance in her mouth to some favorite corner of the hutch. As soon as this is observed, the hutch should be at once cleaned and disinfected, for this will be the last thorough cleansing it will have for some time. The precise day of kindling will be known by reference to the stud book, in which are entered the dates of the various does visiting the buck. This stud book should always be kept, and, in addition, it is a good plan to fix to each hutch labels of wood or of slate, 2 and 1-2 inches square, bearing dates corresponding to those in the stud book. The book should also give the number brought forth at each litter, and it thus becomes a valuable record of the yearly total produced by the doe. The hutch labels can be easily cleaned and prepared for other dates as required. This plan is by far the best, and the least trouble, as by it you at once can see when the interesting event may be expected."

No. 301—"The length and weight of a doe should regulate the time to breed. As a general thing, a doe should not be bred until she weighs at least eight pounds, and has an altogether racy appearance. If you are breeding for the fancy, and wish those extra long hares, wait until both buck and doe are eight months old. An important part is to mate the doe to a buck that is strong in those parts where the doe shows a weakness, and vice versa This will tend to eliminate the defects of both the parent stock in the offspring. Another point: The foundation stock should be of some good pedigreed strain. This is all important. Fortune never smiles on the haphazard breeder. One must know what the particular marking strain has accomplished in the past, and the proper way to keep posted in the matter is to have a complete record of your stock. One strain may be weak in a certain point, and oftentimes reproduce it with startling regularity. To avoid this, you must know to a certainty what other strain you mate to that is free from this weakness, or you will never reach the top round of success. Thus you may readily see the importance of pedigrees. In selecting your brood doe, the first property to receive attention is color. She should have a rich red coat, rather inclined to a dark shade, should be of good length, not too fat, and her coat possess a lustre. She must have good

under as well as top color. Next for consideration comes shape. The doe should be of good size, long bodied, and limbs as fine as possible. The more nearly perfect your doe in this respect, the better your chances for getting shapely youngsters. If it is not the lot of the doe to possess the desired color, be sure you get the fine front and gracefully rounded haunches at least, as in the transmission of this property she is very strong. Taken as a whole, your brood doe should have good length of body, be fine limbed, have plenty of ticking and ear lacing, well colored front and hind legs, rich body color, slim, neat head, eye large and full. Let the buck be a shade lighter, but possessed of good general body color carried well down the sides and haunches. Don't tolerate the grayish coat for a moment. The fore legs should be free from ticking, and the hind feet well colored up to the hock. He should possess good shape and be of lively disposition. Try and get a buck with as lean a head as possible. It has been found that a young buck is best to transit this property. You will also get more vigorous and lively progeny from such an animal. To sum up, your buck must be of the highest excellence, being particularly strong in head properties. When bred, the doe is placed in the hutch where she is to rear her young, which are supposed to arrive after 30 days have elapsed. During gestation she should be provided with nourishing food. About a week before the family is expected, place a handful of clean, soft straw in the doe's hutch, with which she is to build her nest. She may not use it immediately, but don't worry; just allow her to pursue her own course. Water vessels and feed cans should be fastened to the side of the hutch, as she sometimes sees fit to use these also. Fresh water should be kept continually before a bred doe, as an abnormal thirst is apparent at the time of kindling. For best results, she should be kept as quiet as possible during the whole period of pregnancy. Look into the nest box after the doe has kindled and ascertain if any dead are present; also note the number of youngsters. Any undesirable ones may be killed. In case of 10 to 14, a nurse doe is necessary. She can be a cull Belgian or a common white or Dutch rabbit, and both being bred at the same time will kindle together. If the nurse is needed, her young may be destroyed and those of the pure bred Belgian divided between the two. The doe possesses accommodation for but eight young, and it would be the height of folly to allow her to raise more. Better results are obtained by allowing but six

youngsters to a doe. An important point to be observed in rearing the youngsters is the feed and care of the nursing doe. She requires milk-producing feed, such as carrots, peas or any of the numerous succulent plants which abound on all sides. Bear in mind, she not only has to supply nourishment for her own body, but also a good-sized family. Plenty of food should be before her at all times, that she may help herself when so inclined. Too much stress cannot be placed upon this point, and if you desire quick maturing, vigorous stock, give proper attention in this respect. A little bread and milk is much relished by a nursing doe and aids her in supplying nourishment for the youngsters. This may be fed two or three times a week if convenient. At the age of two or three weeks, the youngsters begin to show themselves. They may be rather timid at first, but this soon wears off as they become accustomed to their surroundings. At this time, it is well to place a small dish, or box of dry bran, before the entrance to the nest box. This not only encourages their remaining out and enjoying a breath of fresh air, but it is also an excellent feed. Of course, other feed, such as oats, alfalfa hay, etc., will answer the same purpose. The youngsters may, under ordinary circumstances, be weaned at the age of six weeks. They should by this time, have a good start and be able to look out for themselves. Give them a good runway, say six to ten feet long by two to three feet wide, so they may exercise and lengthen out. This also promotes early maturity and aids their attaining that racy appearance so much coveted by all real fanciers. At the age of ten weeks, separate the bucks, as they may cause much mischief if allowed to remain with the does. If raising stock for market, caponize the bucks when about four months old. They will fatten quicker and make much better meat if this method is followed. Always keep the little ones covered with the fur provided by the mother until they begin to grow their own coat. Keep your young hares until they are about three months old before you sell them, and both you and the purchaser will get a fair idea of what they are going to look like when grown."

No. 302—"It is always better to breed from rabbits aged about ten or twelve months, for the offspring are generally much stronger and get on a great deal faster. The young fancier should always put the doe to the buck, and never the buck to the doe, and the latter should remain only a few minutes in his hutch. The spring time is always the best season

to pair the does, although, if a rabbitry is kept warm and comfortable, litters may safely be reared, but never as well as in the months of February, March and April. I generally allow my best does to have only two litters in the year, while the second-rate ones have three. I always take care that my does suckle only about three, and in some cases four, but never any more, so that the young ones—if the mothers are good milkers—become large ones, and if of the right exhibition color, they fetch a good price, and amply repay me for those I have destroyed. During cold weather, the doe and her young should be made warm and comfortable, and well fed on good food. Satisfactory results will then follow. I keep a few Dutch does. They are excellent mothers and very good milkers, and by this means all the litters from the other does are reared. When does are only allowed to breed two litters in the year, the young may remain with their mothers until they are almost through the moult, and I find that they thus do much better, and retain more strength in battling through, scarcely a young one being ever lost. The fancier should have his hutches cleaned for his does before they are about to kindle,and the time for kindling should be recorded in a stud book, so that the proper dates may not be overlooked. Mice should be kept out of the breeding hutches if possible, for breeding does do not like them, and often scatter their litters about the hutch floor, with the notion, no doubt, of protecting them. It is a good plan to bring a kitten up among the rabbits, and this can be done very safely by putting a new born kitten to a doe rabbit just kindled, for she will suckle and bring it up to a given period, and thus domesticated it will do the rabbits no injury when matured, but will only kill the mice in the rabbitry. Before the doe kindles, I take care to let her have a copious supply of cold water, because after kindling she becomes very thirsty, and if the thirst is not quenched, either in this way or by giving succulent food, she may destroy her young to satisfy her craving. When I have my does in kindle, I am always mindful, in entering my rabbitry, especially with strangers, to go in quietly. Above all, keep strange dogs out of the rabbitry, or much alarm and mischief may occur. When my does kindle, I wait four or five days—unless I have Dutch foster mothers ready at the time—before I peep at them, because some does do not like their young ones disturbed; but some old breeders I have will look on while you examine the little family, apparently unconcerned and will, when you replace the

nest box, carefully inspect them and, finding all right, will leave them and retire into the feeding and sleeping compartment of the hutch. When young rabbits are with their mothers, aged about 10 weeks, give them, if in summer, a little green food, such as dandelion, swine-thistle, grass, and foreign comfrey, plenty of oats, and a little good hay, and this will prevent them from having pot belly. The pot belly in rabbits is caused by giving them, when so young, cabbage, lettuce, turnip tops and such detereious food. But the fancier should never, upon any occasion, give them this kind of objectionable food. It is a very good thing to give young rabbits a little green parsley, which tends in many instances to prevent pot belly among them. During the whole of my experience, I have had only one case of this kind in my rabbitry; but scours I have had in abundance, but never after I gave up feeding on cabbage, lettuce and turnip tops."

No. 303—"I would advise you to buy some good does to start with, and be sure they are pedigreed stock, and have them bred to the finest bucks possible. This is the cheapest way to begin. If your means are limited, buy a few really good does rather than a number of inferior ones. It certainly pays to get the best. A fine buck from imported stock, or imported himself, is always a good investment. They cost money, but bring in an income from the start. If you can't afford to buy a mature buck, a good way is to purchase a youngster from celebrated stock. In a few months he will be useful and profitable."

No. 304—"Belgian hares may be used at seven or eight months, but not before, if it can be avoided. Bucks that have been once used stop growth, and rarely improve in condition. I like an aged buck and a young doe, then we get by far finer specimens as far as ear and size go. I may add, for the information of amateurs, that they will often find rabbits born without hair (fur) while others will have quite long coats, like satin. I attribute the cause to the does being in ill-health, and kindling too soon after a previous litter. The young in this case always appear puny and delicate for days. I am of the strongest opinion that no rabbits of any class should be mated during their changing of fur, as this, I well know, interferes most unfortunately with their offspring's future coats. I never like to be without foster mothers (nurse does) and I like them to kindle a few days before (which is the best) or a few days after my valuable does do. Sometimes we are very glad to

obtain them even ten to 14 days after—that is, if we cannot procure them to suit us earlier. This is how I manage: I have say eight young in a litter. As soon as practicable, I take out the does, both the nurse and the valuable one—place them in hampers out of the way, and carefully select two or three of the young for each nurse doe, taking care to blow the fur of the nest off them, or the foster parents would smell it and see it, and instantly destroy them. I then put them in among the nurse does little ones, and placing some tempting food in their run, I put back the does and then if they are left alone, they bring up the newcomers. On about the second or third day after, I take away some of the nurse does own litter and destroy them, as the others thrive faster from the extra supply of milk. If litters are small, I do it at the time I put the others to their new mothers. At the ninth or 15 day after kindling, strike down the does again, and you will profit by it. I believe in a doe having young say six litters annually. My object in keeping foster parents is twofold: I save the does health by allowing only a few of the young to be brought up, and they are then finer animals. The does will rest and they will bear offspring till they are from four to six years old without much strain on their constitution."

No. 305—"A new enemy to the Belgian hare has come to the front lately. Several parties have told me they had entire litters just kindled, killed by mice. The only sure remedy I can suggest is to cover the front of the breeding hutches with fly screen, and then go for the mice with traps and rough on rats. It is well for breeders to be on the lookout for mice. That reminds me that about one year ago one of our leading breeders was about to trade some hares for some fancy mice. His better half told him if he did, she would set a trap and kill all of them. He didn't trade. Some breeders seem to worry a great deal about 'what shall we do with our pelts?' or 'is there a market or pelts?' That part of the business does not worry me a little bit. The fur clipped from a dry pelt, and put into the nest of a doe about due to kindle, if the weather is cold, is worth ten times what a dealer will pay for the pelt. Very few does will pull enough fur on a real cold night to keep the little ones from freezing. A little help goes a long ways to save the new born litter, which is worth dollars while the pelt is worth cents."

No. 306—"I never breed with sickly or ailing specimens but on the contrary strive to have my bucks as vigorous as

possible, and my does I like to have as large, as healthy and as well bred, as it is possible to have them. I also like to have manifested in my breeding does that kind, tractable disposition which in almost all cases is the foreshadowing of a good, kind mother. I find great difference between doe rabbits with respect to suckling qualities. Some seem to be provided with better milk-giving qualifications than others and, by noticing and noting this, the next time they have young ones, if the bad milkers have large families, some of the youngsters can be taken away from them and given to nurse does. Dutch are a grand variety to keep as nurses, for this reason—they almost invariably have a great deal more rubbish than good ones. The bad ones can be killed and their places taken by offspring from bad milkers of other varieties. In all cases. I never allow my mothers to bring up more than four or five, and three is the better number. A few days (say three) before my does are due to kindle—the time for gestation running from 30 to 34 days—I clean their hutches well out, sprinkle the floors plentifully with clean sawdust, and give a generous supply of sweet, soft meadow hay, and every day up to the time of kindling, a dish of clean, fresh water. After a doe kindles, wait for a couple of days and, first thing at morning, go gently to her hutch, take her out therefrom, place her in another hutch, previously prepared, give her a feed, and leave her until dinner time . Now take the next box out of the hutch, part the top of the nest, and take a peep into it. Take the inmates out gently one at a time, and place them in an old felt hat. You can then make a selection of what are wanted, place them back, and give the remainder, over which the above modus operandi has been performed to nurse does, and leave them. They will take no harm, as rabbits feed their young at night time. Consequently, the taking of the mother away till dinner time will not injure them but, on the contrary, the changed young ones will have had time to get the smell of the new nest on them, and their mothers or foster mothers will not have their suspicions aroused. This is an important part of the business, and a little trouble is never lost over it, as many cases are known where, youngsters in the nest having been interfered with, the mother has deserted them. Let young ones stay with the mother until they attain the age of eight weeks and from the time of kindling feed the old doe as follows: Morning, green meat, in summer time and when obtainable—cabbage and cauliflower leaves, lettuce, dandelion,

swine thistle, etc.; winter season, good swede turnips or carrots. Dinner time, all the year round, a feed of oats, or a mash made of fine sharps and bean meal, or pollard and barley meal, mixed up crumbly stiff with boiling water. Tea time, more green meat, and last thing at night, warm milk and bread. Continue to feed as above until the young ones are taken away from the mother, after which feed them, until they arrive at the age of six months, three times a day in this wise: Morning, oats; dinner time, green meat; tea time, mash. After six months, twice per diem will suffice, namely, morning and night: morning, green meat; night, dry meat. I change my description of green meat every week, and find the system very beneficial. If the foregoing directions are attended to, and the rabbits kept scrupulously clean—which is best done by thoroughly cleaning out by scraping and brushing (by coal rake and hand brush) everything of a dirty nature, freely sprinkling the floors with clean sawdust, and giving a handful of sweet hay every morning—no disease will occur, and no disagreeable smell will arise. And now I will give my treatment of suckling does and rabbits for exhibition. When the young ones have attained the age of eight months, I let the does visit the bucks, and am careful in setting down the exact date of visitation. On the evening of the 30th day of gestation, give each doe a feed of milk and bread, prepared as follows: Take a quantity of stale bread, pour over it boiling water, let it steep for ten minutes, pour off the surplus water, and add, say a pint of new milk for every six or eight does. I continue this feed every night until the young ones are taken from the mother. For breakfast, I give either oats or bean meal and bran in equal quantities, and made into a mash (crumbly) with boiling water. Dinner, hay and carrots, or turnips, in winter, or green meat when procurable. I may add here, that I never allow my does to bring up more than four, as quality, not quantity, should always be the object of the fancier. On the second or third day after birth, take the nest box out of the hutch and examine the young ones. If a does has only two or three, then the number (four) can be made up from other different lots. I have done this for years, and never had a mishap. A subject of much importance to all interested in the production of show stock is the prepotency of sires over dams, and consequent serious influence over offspring. Having mixed a great deal among fanciers of every description of prize animals and birds, I have found that 99 out of every 100 of

noted breeders are men who have given the subject much consideration, and the result of their reasoning has led them to conclude that the male bird or animal is the chief consideration. I was lately in the bird room of a noted canary breeder and in the course of conversation, this very subject was reverted to, and he stated he was always very anxious to have the cock birds of the very best type of the breed he was endeavoring to produce in all the glory of the required characteristics. He also stated that he would rather pair good cocks and moderate (though well bred) hens, than good hens and moderate cocks, because he had proved, beyond doubt, that this mode of procedure ultimately gave the best results. In my own particular rabbit fancy, I find it of very little use having good dams unless I have grand sires. The influence of a first sire sometimes extends for generations, i. e., influence of previous sires over offspring by other sires out of the same dam."

No. 307—"In classing Belgians according to color, of course the best of us run a little off on color, from light and dark, and I can say that I have never had a white one thrown in my hutches, and few black. I do not consider the black a cull, but rather of great value in crossing with very light of the opposite sex, on the same order that a brindle dog will throw good points by a bitch which lacks them, no matter how well bred. I have had a clear rufous red doe vastly improved by mating with a black buck, when she did not do so by actual test with a light buck and also a splendidy ticked one. When an advertiser builds roomy hutches, constructs buildings to hold such and then gives a rabbit a separate hutch, it stands to reason that prices should advance on such. When the breeder takes pains to pedigree and rear stock not akin it is proof positive that that mode is more work, and in the end more productive than crossing at large and letting stock run together on a farm, as some advertise. I soften the light in all my buildings by coloring the glass, so as not to effect the coats of my pets--a simple matter which carries weight towards richness that the standard calls for. The best way for the young or old beginners to find the true colors of his pets, when in doubt, is to visit first class rabbitries or show rooms, or exhibit his stock and find which the judges give preference."

No. 308—"Some does will breed when four months old, others will not breed until seven or eight months old. Then again, some does will be able to bring up six or eight young

ones, and keep them in good condition, while others will not be able to bring up above two or three. This can easily be ascertained when the young ones are two or three days old, and if you find they are not filled out well with milk, kill some of the worst-marked ones to make room for the good ones. In these matters, beginners will have to use their own discretion."

No. 309—"Most of the fine exhibition and breeding stock in England has found its way here in exchange for American dollars. Pedigrees count for just this much, they give one an idea of what may be expected from the young stock in advance, by knowing what their ancestors were, for like produces like, though all young will not be prize winners though their fathers were. But to have good pedigrees is not all. To have animals that fit their pedigrees is not all. The first requirement should be health, for the best animal that ever lived will degenerate into the veriest scrub if left to shift for itself. It is environment, food and attention that go as much to win prizes as does the long list of pedigrees and famous ancestors. All these things should be taken into consideration when buying stock, and while it is a good plan to buy from the acknowledged fine show specimens the work has but commenced. Good domestic breeding animals can be had in this market for $10 up to $300, bred to the fine bucks that are so numerous here. One of the best ways to get a good start, and the way I started, is to get a few good breeding does, and as fine a buck as I could find."

No. 310—"From date of birth, the care of young hares is left to the doe until the young begin to feed, which will usually be about the fourteenth day. If it is desired to push them forward, a little bread and milk once a day may be given. This may be alternated with plain corn bread or dry chop. These with oats, and now and then some oat flakes, will be found an excellent diet for the doe and young. At six weeks old, the young must be taken away from the doe and put in pens by themselves. After they are taken from the doe, the most critical time for the young begins, and for some weeks the greatest care should be taken to avoid errors of feeding. If the doe has not been used to green food, no green food should be given to the young until they are past three months old, and then very sparingly until they are made accustomed to it. No soft feed should be given to a specimen intended for show purposes, as its flesh will be flabby. The best results are

generally obtained by a strict dry food course. At three months old, the does and bucks must be separated and a record kept, so that they can be known and no mistake made as to parentage. This can be done by putting in separate pens, but then room is not always available and marking must be resorted to in order to avoid losing track of the parentage."

No. 311—"In their eagerness to 'get a lot of 'em and get 'em quick,' as one amateur explained it, many breeders of Belgian hares are doing an irreparable injury to their stock. Breeding a doe when she is only four or five months old weakens her, and her offspring start out with a constitution weakened and impaired, consequently, if sickness or disease overtakes them, they have little or no vitality to withstand the attack. A doe should never be bred before she is six months old, and it is better to wait until she is seven months old. When a doe has a family of more than six, it is better to kill all above that number, as the six will grow rapidly, will be stronger and more vigorous than with eight, ten or a dozen in the nest. When a doe has an extra large family she will wean them at an earlier age than with a less number to suckle, and this is one prolific cause if slobbers in your hares. Being deprived of the mother's milk, and forced onto dry feed before their little stomachs are prepared for it, causes the food to become impacted in the stomach, which produces irritation and slobbers. A less number and better quality of stock will give better returns in the long run."

No. 312—"Looking for some Plymouth Rock fowls about a year ago, I stumbled onto a Belgian hare doe with eight two-year-old youngsters. She was a very pretty thing and at once won my interest, and learning that she was for sale I bought her and her family. Having an empty stall in the barn, I made that into two temporary pens and thus made bunnies quite comfortable. I next looked around for a good buck, and having found one to suit me I bred the doe. I soon found that if I would avoid trouble I must separate the youngsters, so put in another partition and commenced to separate according to sex, but to my great joy (for I had the breeding fever) found only one male. The next thing was to provide a suitable male to head this tribe, and an active search resulted in the finding of a very good specimen for which I exchanged my male, and I was ready for business on an independent scale. As soon as the young reached the age of five months, breeding commenced, and I had to look around for

more hutches, as I supposed each mother must have separate quarters. Dry goods boxes obtained at the nearest town for 15 to 25 cents each seemed to supply this need nicely, and a little work in remodeling them made them quite comfortable. Well, here they come, three, five, six, seven and even nine at a clip, rabbits everywhere, but not atisfied with this, I here made my first fatal mistake by again breeding my does at once, and the result was that when the youngsters of No. 1 most needed a mother's care, crop No. 2 was at hand, and crop No. 1 had to be pushed off to care for themselves, and the result was a fatal check. But how about the mothers? Poor thngs, they resented the abuse in different ways, namely, the mothers of six, seven and nine had only one, three and four, while others abandoned the second litters entirely, and still others threw them out of the nest to perish, and instead of 45 as at first, I only saved 17. Don't breed too soon. Six months of age is soon enough and two months between litters is little enough. Well, the old mothers had eight and six, so here I had 76 youngsters, and expectations of hundreds more, so when a man came along and offered me six dollars a dozen for them, I let them go and thought I had done well. Today I could sell them all for five dollars a pair, and doubtless many of them for double that, as I cannot near fill by orders for breeding stock. Don't sell too soon. So it goes, and I am still learning, but this I know, that a small cash investment in Belgian hares, a little time nights and mornings expended in their care and a small cash outlay for bran has netted me over one hundred dollars cash profit in one year, and I could sell my stock on hand for two hundred dollars more. I still have my Plymouth Rocks and credit them with leading me to the Belgians, but I have lost my interest n them."

LESSON TEN.

——Killing, Skinning, Dressing, Tanning——

How to Kill a Belgian by Twisting Its Neck, or by a Blow on the Head—How to Cut the Jugular Vein Properly—Do Not Soak in Water—How to Take the Skin Off Whole—How to Prepare the Carcass for Cooking—How to Slaughter a Large Number—How to Salt the Pelt—How to Clean Fur Soiled by Handling—Fur Used in the Manufacture of Boas, Muffs, Capes, Robes, Hats, Etc.—Description of the Hat-Making Machinery—Pelt of a Belgian Less Than One Year Old Not Sought by the Furrier—Market Price of Fur.

ONE way to kill a Belgian hare is by twisting its neck, a skillful operation.

An operator of training will kill a Belgian thus in the twinkling of an eye.

Perhaps the best way for the inexperienced breeder is to cut the throat with a sharp knife, severing the jugular vein.

Even in the case of a Belgian killed by neck twisting, the throat should be cut.

Some butchers kill by striking a blow on the head.

The blood settles and coagulates at the spot where the blow lands, but it is a small spot.

After the throat is cut, the carcass should be hung head downwards to drain out the blood.

The entrails should be removed only just before you are ready to cook. All game tastes better after it has been kept for a day or two and allowed to "ripen," or acquire the gamy flavor so much prized by epicures.

After paunching, it is not necessary to soak the hare in water. Simply wipe it out with a clean cloth. The flavor is thought by some to be impaired by washing. Soaking in water draws out the blood, which you wish to keep in the flesh, and extracts other nutritious value also.

To take the skin off whole, cut from hock joint to hock joint across vent and draw the pelt off over the head and cut off at a point back of the ears; or, if the ears are to be left on the pelt, let the cutting be done on a line extending around to point of nose. Then place the pelt on a stretcher made of half-inch board six inches wide at the top and four inches at the bottom. Cut this in two parts, from end to end. Stretch the pelt over the two, place edges together and rub salt over the pelt when fresh, and then sprinkle with powdered alum and allow to dry. When about dry, remove from boards and rub

with the hand until dry. The skin will then be as soft and pliable as buckskin. Place the pelts where there will be plenty of fresh air, yet not in the direct rays of the sun.

Then, to prepare the carcass for cooking, slit the belly lengthwise and remove all the intestines. The liver, heart and kidneys are to be saved, also the head, if it is desired, after the eyes have been removed. The kidneys may be left attached to the carcass of preferred.

If you are likely to have a number to dress, from time to time, have a suitable place to do the work and be prepared in this manner: First, take two pieces of board, four by eighteen inches. Nail these together in the form of a trough, with open ends. Nail four pieces for legs to raise the trough sufficiently high so you can work over it without bending down. The legs can be set up like those of a saw buck, as the cross legs in that way will prevent tipping over easily. Have a hook up on a rope about five feet from the ground. Set a pail under one end of your trough, or killing rack, to catch the blood, and you are ready to begin operations. Take your hare, draw one foreleg back between the two hind ones and with a stout cord secure them in this position. This positively secures them so they cannot kick around and get blood all over their fur. Place the hare on its back in the killing rack, with head hanging over the pail. With one hand twist the head to one side by the ears and with the other hand strike a smart blow with a stout stick just behind the ears. Pass a sharp, narrow-bladed knife clean through the neck where the jugular vein lies, without cutting the skin. Clean out on front of throat. Through this hole the hare will bleed plentnfully and the fore-leg which has been left free will work back and forth and pump out every drop of blood from the heart. When dead, unfasten the legs, cut the skin around the first joint of the hind legs and slit the skin on the inside of the thigh to tail, work it from the hind legs and slit the skin on the inside of the thigh to tail, work it from the hind legs, then tie the hind legs together securely and hang the hare up. Pull the skin down over the entire length of body, working out fore-legs, and skin down over the head. Remove entrails, saving liver and heart, and wash out carcass with clean, cold water. Let hang a few minutes to drip. The head should be cut off, as to many women it is repulsive looking after being skinned. The heads are very nice eating when boiled tender in salted water and served with Spanish sauce. When not used in that way,

the skull can be broken and the brain removed. The brain makes a dainty morsel when fried in butter.

After the hide is removed, apply common table salt to the flesh parts and rub in well with the hand or an old cloth. This is what causes the hair to remain intact on the pelt. The salt strikes through and binds down the epidermis in which the roots of the hair are fixed, and if the salt is not allowed to strike directly upon the flesh side of the skin at all points, these places will soon be denuded of fur. Roll the skin up flesh to flesh, and allow it to remain a day or two, and if upon examination the second day any soft spots are to be found, salt again and work well with the hands. The pelt should now be scraped with a knife to remove all flesh and fat. The skin should be thoroughly relaxed before scraping. After relaxing and scraping, place the hide in a solution of one part salt and four parts water, to which, when the salt has become thoroughly dissolved, add a few drops of sulphuric acid. Care should be taken in handling the acid, as it is a deadly burning poison. Allow the skin to remain in this solution for a few days, after which remove and cleanse with water and partially dry. Then the real labor comes in. Work the skin while in a semi-moist condition, stretching and pulling in all directions and working it into a flexible condition. Should the skin become dry before thoroughly worked, apply a little fresh water on the flesh side. Never work the skin when dry, as it is very brittle and tears easily. A good way to break all the fibres is to rub over a square corner of some hard substance, such as a planed plank or an iron bar. This leaves the skin soft.

If the hair becomes soiled by handling, it may be cleaned with gasoline or a very weak solution of oxalic acid. Be very careful not to have the oxalic solution too strong. Use about one ounce of oxalic acid to two quarts of water. Allow the acid to dissolve thoroughly before using.

The pelts of the common rabbit cannot be used in the manufacture of fur garments as the skin is tender, and while dressing comes off in pieces, and is therefore almost useless for that purpose. The skin of the Belgian hare is the reverse. It is tough and comes off intact, and can be used in the manufacture of garments, such as ladies' boas, muffs, capes, etc. The fur is also used in the manufacture of hats. The machinery consists of a hollow cone of copper, of the size of the felt cones required by hatters. The cone is covered with per-

forations and it fits onto a metal shaft of the diameter of its base by means of a collar, which can be turned round by a belt, so as to carry the perforated cone with it. At the bottom of the metal shaft is a fan, moved by machinery, which produces a strong downward draught, so that if the hairs are thrown against the cone, they are held tighlty by the currents of air through the perforations and as the cone revolves, its outer surface becomes entirely coated with the hair. When a sufficient thickness is secured, the smooth copper cone is easily drawn out, leaving a cone of wool, which is felted by the usual process of wetting, heating, etc. Another ingenious contrivance in this machine is to make the draught of air caused by the fan blow the rabbit fur forward to the cone so as to distribute it with an evenness which could not otherwise be obtained. The skins, after the hair has been removed from them, are sold to glue makers and are used, mixed with shreds of other skins, in the manufacture of glue and size.

Admirable imitations of the rarer and more costly furs are made. The pelt of an animal less than a year old is not sought by the furrier, although when properly tanned it is suitable for rugs, capes, etc., and a buggy-robe made of the well-selected and well-tanned pelts of animals from five to seven months old, suitably lined, presents an elegant appearance. The pelts of young animals find a ready market in Chicago and New York, the price for the entire pelt, 10 to 25 cents per pound, being regulated by the amount and quality of the fur on it, fur of a good quality being worth 75 cents a pound.

LESSON ELEVEN.

——How to Caponize——

Caponizing Improves the Quality of the Meat and Also Economizes Space—Take the Hare Out of Sight and Hearing of the Others—Two Operators Necessary, One to Hold and One to Cut—How to Manipulate the Knife—How to Scrape the Artery of the Scrotum so as to Prevent Loss of Blood—Apply Hogs' Lard or Vaseline, and No Water—Stitch with Needle and Thread May Be Taken—How to Perform the Operation Single Handed.

MALE hares when caponized at the age of three months, or thereabouts, when the testicles are developed, grow to an extra large size, weighing ten or twelve pounds, and their meat is better flavored. A large number can be kept in a single hutch without their fighting, therefore by caponizing, the breeder will economize his space. People prefer fat capon ized hare to eat just as they prefer fat caponized chicken.

Do not caponize an ailing Belgian. Be sure he is sound and healthy.

Before performing the operation, take the hare to a place ought of sight and hearing of the other hares, and make as little fuss about it as possible.

Use a razor, or a very sharp knife. The knife is better. Make certain that it is chemically clean by dipping it in a disinfecting solution, or by passing it through the flame of an alcohol lamp. Of course, do not heat the blade enough to draw the temper.

It is best to have an assistant when performing the operation. Let him hold the Belgian in his lap, turning its back towards him and its rump towards you, and holding one front and one hind foot in each hand, spreading the legs apart, thus exposing the parts to be operated upon.

Your assistant should have good nerves, and should grasp the hare firmly, but not too tightly. If you decide to begin the operation, be sure and carry it through at once to a successful finish.

Seize with the thumb and first two fingers of the left hand one of the testicles, which the animal will endeavor to draw up into his body. When you have succeeded in grasping it, divide the skin of the uter pouch, or scrotum, with a single stroke of the knife. It is necessary to cut deep enough to make a good-sized opening in the scrotum and in doing this the testicle will be laid open more or less. With the left hand

take the testicle from the scrotum, drawing it out about two inches With the knife separate the artery and the spermatic cord, cutting upward, and leaving a little, pea-shaped bulb on the end of the spermatic cord. Then cut between this bulb and the testicle, allowing the cord to drop and return to the scrotum.

Next commence about two inches from the testicle to scrape on the sides of the artery downwards with the edge of the knife, making a light and slow drawing stroke, touching the artery a little lower or nearer to the scrotum with each stroke. Perhaps a dozen or twenty of these little fine cuts will be necessary to wear down before severing the artery, which should be done well down, close to the scrotum. In this way, but little blood will be lost, while if the artery is cut square off, much blood would be lost, and the hare might die.

Repeat above operation with second testicle.

The testicle on the left side should be taken out first.

Apply a little hogs' lard or vaseline to the wound. If it is summer time, apply a little pine tar to keep the flies from doing injury.

Do not put any water on the wound.

The wound may be closed with a stitch from needle and thread, but this is not necessary.

The wound ought to heal, and usually does, in four or five days. The percentage of loss by caponizing is very small.

The operation may be performed single handed by placing the Belgian head downwards in the leg of an old boot, so as to confine its struggles. If you try this method, be sure a hole is cut in the foot of the boot so as to give plenty of air at the nose of the animal. Don't suffocate him.

The best job, however, is done by two, one to hold and one to cut, as described.

Be gentle, but firm and quick, in performing this operation. The sooner it is over, the better for the Belgian.

LESSON TWELVE.

——Cooking——

A Stuffing for All Occasions—Four Recipes for Roast Hare—Three Recipes for Boiled Hare—Four Recipes for Jugged Hare—Four Recipes for Fried Hare—Friccasseed—Salad—On Toast—Croquettes—Patties—In Chile Peppers—Curried—Pie—Liver Entree—Baked with Rice—Jellied—A La Creme—Hasenpfeffer.

FOR stuffing, take the liver, heart and kidneys, cut them up and fry them in an ounce of butter over a low fire, with a teaspoonful each of minced onion and carrot, and a quarter of a pound of minced mushrooms. After five minutes of frying, moisten with a sherry glass of sauterne, and add half an ounce of glaze. Continue to cook slowly and as soon as the meat is soft, let it get cold, and then empty the contents of the sauce-pan into a mortar, pounding and passing the whole through a wire sieve. The puree thus obtained, seasoned with salt and pepper, should be stirred into a bowl with the usual six ounces of breadcrumb, minced or powdered herbs, zest of lemon, two ounces of butter and two eggs. Before packing the hare with this, line the inside with thin strips of cooked streaky bacon.

ROAST HARE (NO. 1).

Stuff as directed, or fill with veal forcemeat, sew up and truss. To truss properly, skewer the head tightly between the shoulders, and skewer the legs closely to the body. Fasten bacon on the back. Baste liberally while cooking. When partly done, dredge over with flour and baste again. Have the fire a hot one. Serve at once from oven, placing the bacon on a separate dish.

ROAST HARE (NO. 2).

Fill with oyster or bread dressing and sew up. Skewer the neck under the hindquarters and place in covered roasting pan. Mix butter and flour in a smooth paste and cover lightly over the hare. Add water as you would for any roast and bake from one to two hours, according to the age of the hare. Remove cover the last twenty minutes and brown over nicely, garnish with cress or parsley.

ROAST HARE (NO. 3).

Place a layer of onions in the bottom of the pan, then a layer of the meat neatly cut. Add another layer of onions and alternate with meat until the pan is full. A double roaster is best, as it keeps the steam in more thoroughly. No water

is needed, as that is furnished by the onions.

ROAST HARE (NO. 4).

Prepare a stuffing by chopping fine one-quarter pound salt pork and a small piece of onion. Pour boiling water over six Boston crackers, then chop with the pork, seasoning with sage, salt and pepper, adding what boiling water is necessary to moisten it, and stir in one egg. Wipe dry the hare, fill it with the stuffing and lard with small strips of halt pork. Allow 20 mnutes for each pound when cooking. Put a piece of butter as large as an egg in a cup, fill with boiling water and use it to baste the hare while roasting.

BOILED HARE (NO. 1).

Skewer as heretofore directed. Put in kettle with enough hot water to cover. Boil until tender, time according to age. Dish and smother with mushrooms, onions, liver sauce or parsley and butter, as preferred. If liver sauce is used, boil the liver a little while and mince or rub through a sieve before adding the sauce.

BOILED HARE (NO. 2).

Slice one large onion, one chile pepper and four medium-sized tomatoes into a stew pan, and bring to a boil. Cut the hare in pieces and put in as soon as it boils; add one teaspoon of salt and enough hot water to cover. When nearly done, thicken with flour and add butter the size of an egg.

BOILED HARE (NO. 3).

Boil the pieces in a small amount of water, using a covered vessel to retain the steam. When thoroughly done, pour over a cream gravy to which has been added a little sherry. A flour gravy will answer if cream is not at hand. Serve hot.

JUGGED HARE (NO. 1).

Cut in pieces and season with pepper and salt. Fry brown and season with a little thyme and chopped parsley, nutmeg, cloves, mace, grated lemon peel, and add a couple of anchovies. Put a layer of the pieces in a wide-mouth jar, then a layer of thinly sliced bacon, and so on with alternate layers. Add two gills of water, cover and put in cold water, and boil three or four hours. Remove the jar, take out the unmelted bacon and make a gravy of a little butter, flour and ketchup. Some add a little grated lemon peel.

JUGGED HARE (NO. 2).

Skin, wipe with a towel dipped in boiling water to remove the loose hairs, dry thoroughly and cut in pieces. Stew with pepper and salt. Fry brown. Season with two anchovies, a

sprig of thyme, a little chopped parsley, nutmeg, mace, cloves and grated lemon peel. Put a layer of the pieces with the seasoning into a wide-mouth jug or jar, then a layer of bacon, sliced thin, and so on till all is used. Add a scant half-pint of water. Cover the jar close and put in cold water. Let it boil two or three hours, according to the age of the hare. Take the jar out of kettle. Pick out the unmelted bacon and make a gravy of a little butter and flour, with a little catsup. A teaspoonful of lemon peel will heighten the flavor.

JUGGED HARE (NO. 3).

Cut in pieces and place in a stone jar. Fill the space between meat pieces with veal and bacon, a pound each, cut to dice; mix with liver of hare, also cut fine; add a teaspoonful each of mace, cloves and black pepper and salt. Place thin slices of bacon on top. Cover with a lid of plain paste made of flour and water. Set the jar in pan or pot containing water, and bake in slow oven. Keep from burning by placing a greased paper over the paste. Put no water to the meat. When done, set away to cool, then pound pieces of the hare, bacon and veal to a paste, mix in gravy from the bottom when boiled almost dry. Add more seasoning when needed. Press solid into cups or small jugs, covering top with melted butter, and set away in a cool place.

JUGGED HARE (NO. 4).

Bone a hare and cut in small pieces. Cut also an equal weight of fat and lean ham, put in a stew-pan with a little butter. One cup of stock, pepper, salt, allspice and mace. Let it draw for an hour over a slow fire, then add a pint of port wine and boil very gently until the liquor is reduced to a glaze. Pound the meat tender in a mortar till very smooth. Add seasoning if required. Pack closely in small porcelain pots. Pour a tablespoonful of clarified butter into each, and place in a slow oven for half an hour. When cold, fill up the pots with clarified butter. This will keep a month in a cool place.

FRIED HARE (NO. 1).

Cut into joints, salt and roll in flour. Drop the pieces into boiling fat (butter and sweet lard), turning frequently the first few minutes. Then let fry more slowly for about 20 minutes, or until satisfied it is well done. Pile on platter and garnish with sliced tomatoes, stuck through with sprigs of parsley. For frying, select hares about three months of age, and always let stand over night before using.

FRIED HARE (NO. 2).

Use equal parts of lard and beef suet and have it deep enough to cover the hare. Cut in pieces. Roll in flour and fry in the boiling fat, turning frequently, and keep covered until nearly done, salting lightly after the first turning.

FRIED HARE (NO. 3).

Dress a hare not over three months old. Cut it up, roll each piece in flour, pepper and salt, and fry as you would chicken, until nicely browned on both sides. Use butter and any kind of frying fat. Keep tightly covered when frying. When nicely browned, raise the cover and add a spoonful of water to prevent burning. Continue to add a little water as needed, keeping cover close. Cook three-quarters of an hour.

FRIED HARE (NO. 4).

Soak the hare over night in equal parts of salted vinegar and water. Put one-fourth cup of butter in a frying pan, add a sliced onion and fry till a light brown. Wipe the hare with a dry cloth, put in the pan and cover with claret, letting it simmer slowly for two or three hours.

FRICASSEED HARE.

Lay the pieces in cold water a little while, drain well and place in saucepan with pepper and thin slices of pickled pork. Cover with water and let simmer for 30 minutes. Add chopped onion and parsley, a blade of mace and a clove or two if liked. Make a smooth flour paste, stir in and let simmer until meat is tender, then add half a cup of cream. If two thin, add more flour. Boil up once and serve hot.

HARE SALAD.

Salt the hare and boil until tender, then shred very fine. Do not hash. Have ready your salad plates with fresh, crisp lettuce on each, and arrange thereon the shredded hare in a tasty manner. Sprinkle over with apple or any variety of chopped nuts. When ready to serve, add the following dressing: Place on the stove and heat one cup vinegar and water, equally proportioned, to which add piece of butter the size of a walnut. Beat up one egg, to which add heaping teaspoonful flour, one teaspoon mustard, dissolved in water, two tablespoonfuls sugar, salt and pinch of cayenne pepper. Heat vinegar and water to boiling point, add slowly the other ingredients. Thoroughly mix and stir constantly until thick. Set aside and when cool thin with sweet cream.

HARE ON TOAST.

In a chafing dish put a tablespoonful of butter. In this fry

one-half an onion sliced finely. Stick the other half full of cloves. Roll young hare (previously cut in small pieces) in flour and fry a delicate brown. Then add sufficient water to cover meat and allow to simmer gently, adding water when necessary. The remaining half of onion, one scant half-teaspoon of allspice, cinnamon, three or four bay leaves, one small wine glass claret, salt and pepper to taste. If liked, throw one or two red peppers into boiling salted water for a few minutes, scrape out the inside of peppers and add. When done, thicken with a little flour and serve with slices of delicately browned toast.

HARE CROQUETTES.

Put a lump of butter the size of an egg in a saucepan over the fire and when hot stir in a teaspoonful of flour. Add cup of milk and when thick remove to cool. Pour over one pint finely chopped hare, into which has been stirred one beaten egg. Season with salt, pepper and a very little of onion. Shape in cones, roll in fine cracker crumbs and drop in smoking fat, frying a light golden brown. Arrange in rows on hot platter, sticking a sprig of parsley in top of each croquette.

HARE PATTIES.

Use the whitest meat and mince fine with suet. Braise the bones and cook in a stewpan with salt, pepper, nutmeg, grated lemon peel, etc., and et simmer until the flavor is secured. Thicken with flour and butter and stew until quite hot. Bake the patties in patty pans and half fill with the mince. Put on covers. The whole process will take about an hour.

HARE IN CHILE PEPPERS.

Select one-half or a dozen of large smooth green chile peppers. Lay inside the oven until wilted. Then with a fine knife, remove the shiny outside. Also cut one side open and remove seeds and veins. Lay a few moments in ice water, then dry and fill with finely minced hare, seasoned any way to suit individual taste. Lay filled peppers side by side in fancy dish and grate white cheese over all.

CURRIED HARE.

Cut into joints and place in stewpan with two tablespoonfuls of drippings, or butter, and sliced onions to suit. Brown well and add a pint of soup stock. Mix a tablespoonful each of flour and curry, until smooth, in a little water. Place in a pan and add pepper and salt and a teaspoonful of mushroom powder. Let simmer for an hour or so. Add juice of half a lemon and a little parsley. Serve with boiled rice piled

around it on side of platter. Water instead of soup stock may be used if the latter is not at hand.

HARE PIE.

Cut in pieces and boil until nearly done. Make a crust allowing a half cup of shortening, a half teaspoonful of baking powder and a teaspoonful of salt to a quart of flour. Roll to a quarter inch. Line the sides but not the bottom of a deep dish with the paste; fill with the meat, season with butter, salt and pepper. Fill with the liquor in which the hare was boiled, dredging over with flour. Cover with a thick crust and bake three-quarters of an hour.

HARE PIE, RAISED.

Cut hare in small pieces and season to taste with salt, pepper and nutmeg. Cut half a pound of bacon to dice, and when the raised crust is made, place in dish with the meat and intersperse yolks of three or four eggs. Pour over the top tomato sauce or some good gravy. Cover with pastry, brush with egg, and ornament if you wish. Bake in moderate oven until a skewer may be thrust through to the bottom—about an hour and a half. Serve either hot or cold.

HARE LIVER ENTREE.

Boil the liver until tender and cut into pieces. Make a brown gravy and pour over the pieces. Garnish with mushrooms.

HARE BAKED WITH RICE.

Cut up a hare. Stew gently in stock or water, with enough tomatoes to equal the amount of stock, and three green chile peppers, emptied of seeds and sliced fine. Salt to taste. While the hare is stewing, boil a cupful of rice in a quart of water, also boil one dozen eggs until hard. After the hare is about half cooked, line a baking dish, suitable for the table, with part of the cooked rice. Place the hare on the dish, with alternate layers of eggs, peeled and sliced. Pour over this the sauce, unstrained, and cover with a layer of rice and sliced eggs pressed well into the rice. Pour on the top half a cup of melted butter or thick sweet cream, and bake in a slow oven half an hour and serve hot.

JELLIED HARE.

Boil until the meat falls from the bones, and leave in the water over night. In the morning chop fine, season with butter, pepper and salt, and press in a mould until firm. Or, boil tender, cut in small pieces and season with salt and pepper. Add half a box of gelatine soaked in cold water to the liquor

(not less than a quart) in which the hare was boiled. Strain through thin muslin and when it begins to thcken add the meat. Put n moulds and place on ice to harden.

HARE A LA CREME.

Clean and cut up the hare. Melt two tablespoonfuls of butter, fry it in a small onion, minced, then fry the hare until a light brown. When well colored remove the hare and add to the butter an equal measure of corn starch. Stir until smooth, then add milk to make a thin sauce. Place the hare in a baking pan. Pour over it the sauce, strain and bake in the over until thoroughly done.

HASENPFEFFER.

Cut a hare in eight pieces and place in a jar with two or three sliced onions, a level tablespoonful of salt, teaspoonful of black pepper, half a teaspoonful of celery seed and allspice, and two bay leaves. Cover with vinegar. Let stand in a cool place for three days. Then place all in a saucepan, add a cup of water, and cook slowly one hour after it boils. Thicken the broth with flour or corn starch and serve.

LESSON THIRTEEN.

——How to Cure Ailments——

Prevention Is Better Than Cure—Symptoms and Treatment of Abscess, Loss of Appetite, Colic, Constipation, Diarrhoea (or Scours), Canker in Ear, Excess of Ear Wax, Eruptions Cold in Eyes, Sore and Swollen Eyes, Festers, Soreness of Hocks, Inflammation of the Womb, Insects, Liver Disease (or Rot), Mange, Matted Hair, Moulting, Sore Mouth. Paralysis, Pot Belly (or Dropsy), Scurf, Slobbers, Snuffles. Tumor, Caked Udder, Red or Unnatural Color of Urine.

AS to diseases, remember that prevention is better than cure.

By following the instructions on sheltering and feeding, and, above all, by attending to the cleanliness of the hutches, disease will be avoided.

Successful breeders seldom have sick or ailing hares.

Sick Belgians are the exception, not the rule.

Be sure you do not buy diseased hares.

If one of your stock appears to be ailing, give it your careful attention, isolating it from the others, and keep at it until a cure is effected.

Intelligent care and a few simple remedies are all that is needed.

The following instructions are given so as to acquaint the breeder with what may happen to his stock.

Read over the lesson at your leisure and get the symptoms firmly fixed in your mind so that you will know how to do the right thing when the emergency comes.

ABSCESSES.

Symptoms: A hard lump on the surface of the body, accompanied by increase in temperature and tenderness of the part. As it progresses it becomes soft.

Treatment: Procure a sharp penknife and before using pass it through the flame of a lamp, or gas jet, to kill bacteria which may be on its surface, wiping it clean. Wash the knife blade and your hands in a disinfectng solution, say water in which a teaspoonful of carbolic acid has been mixed. Open the abscess with the pen knife and squeeze out the matter. Afterwards bathe with warm water in which disinfectant has been mixed. The wound shou ldbe kept open for a couple of days or it will gather again. It is advisable to keep the hair around the abscess cut short, or it will be come matted with the discharged pus. If the abscess matures slowly, it may be

assisted by hot fomentations or a stimulating liniment. Flowers of sulphur may be advantageously mixed with the food. Plenty of new milk should be given, as often as the rabbit will not eat anything. Bread may be added to the milk if the patient will eat it.

APPETITE, LOSS OF.

Symptoms: Patient sits in corner of hutch and refuses food, or eats sparingly.

Treatment: This ailment is usually the first symptom of more serious trouble. A little stimulant may be used, such as a slice of toast soaked in ale. But if this be refused, the ale may be warmed, and two tablespoonfuls given twice a day, and probably two days of such attention will accomplish all that is required; or, instead of ale, elderberry wine will be found beneficial. When eating is resumed, supply a little bread and milk, carrots, oats, and other food most palatable; and a little extra care will still be needed for a few days longer. Condiments are sometimes useful in stimulating the appetite. Be guided by what appears to be the most likely cause, as the cure of any complaint will usually restore appetite. If the trouble does not arise from diarrhoea, the hare may be tempted by a little dandelion or milkweed.

COLIC.

Symptoms: Patient is restless and seems in pain. Belly is distended with wind.

Treatment: The cause of colic is improper food. Put the patient on a diet of dry food and feed once a day a warm mash in which is a little salts and senna, and a few caraway seeds.

CONSTIPATION.

Symptoms: Absence of droppings. Patient sits quiet in corner of hutch and refuses food. Sometimes body is swollen.

Treatment: The cause of constipation usually is too much dry food without sufficient drinking water. Keep the patient warm and dry. Supply it with green food. There is little fear of its not eating, though caution must be exercised in not allowing too much, and when it has accomplished its purpose, it must be gradually discontinued, and a return made to the general mode of treatment and feeding. Should this vegetable diet fail to produce the desired result in a day or two, a more powerful remedy may be tried, as a little salt and water, which at this time will be drunk with a relish; or 12 dr. of Glauber salts may be dissolved in a pint of water, and two tablespoonfuls given twice a day. Generally, three or four doses will

accomplish all that is requisite. Or the patient's hindquarters may be placed in a dish of hot water as hot as can be borne, for ten minutes. In severe cases, give a bowel injection of warm water and castor oil, in proportion of three tablespoonfuls of the water to one of oil.

DIARRHOEA, OR SCOURS.

Symptoms: Loose, watery dung, irregular appetite. Caused by too much green food, or food wet or stale.

Treatment: Place the patient in a warm and comfortable hutch, supply it with dry food—such as crushed oats and dry bran—with which mix a dozen crushed juniper berries; or mix a little oatmeal and pea meal into a stiff paste, as a more general diet for a short time, until a change is observed in the dung. In the dry oats and bran a powdered acorn of small size may be mixed with each feed. As this is a valuable astringent, no medicine chest for the rabbitry should be without it. Don't assist nature too violently by giving an excess of astringent. This will bring on constipation. When a favorable discharge is seen, a little water may be given, say two tablespoonfuls every third day. Sweet hay will be found of advantage and will be eaten freely. At little ground cinnamon, given in new milk, is an excellent remedy. Care should be taken to apply the remedies on the first symptoms of the disease. Summer time is generally the season in which rabbits are most troubled, because of the absence of green food at hand. Cold water, and cold water and nitre, are recommended by some fanciers as almost certain cures in cases of of diarrhoea.

EAR, CANKER IN.

Symptoms: A thick, yellow discharge from the inside of the ear. The eye on the side of the head that is affected appears to be very weak, with a slight discharge. The patient loses condition and does not relish its food. The discharge from the ear arises from ulceration in the deep recess.

Treatment: Clear out the discharge by a little pressure, using a sponge or soft rag soaked in warm water to which a little disinfectant has been added. Care must be taken that none of the water falls into the ear. When dry, apply a lotion of sulphate of zinc 12 gr., water 2 oz., wine of opium one dr., mixed. The head should be held on one side, and about half a teaspoonful of the lotion poured into the ear twice a day. Feed upon the best food. Extra care in this respect will be required, for if the patient becomes weak, the chances for its

recovery are very slight. Or (2) try mercurius trituration No. 3, dose one gr. twice a day. Decrease the doses as improvement takes place. Or (3) procure a one-foot length of rubber tube, one-eight inch internal diameter, and blow into the ear twice a day boracic acid powder, as much as would cover the surface of a dime, not piled up. Put the powder into the rubber tube with a spoon and small paper funnel, before blowing it into the Belgian's ear.

EAR WAX, EXCESS OF.

Symptoms: Accumulation of wax in the ear. Some seen never to have their ears made sore by it, but to have them always filled up with scabby excrescences clinging to the interior, and for which no positive cause can be assigned. With animals of the same litter, in the same hutch, and consequently with the same treatment, it will be found that some are perfectly free and with ears always clean, while the others require constant attention and treatment for the removal of the wax. The ears of all Belgians should be occasionally examined to see if they are free from such attacks. It has sometimes been thought that falling dust from an imperfect floor of a hutch overhead, which erect ears might receive, acted as an irritating cause, and formed the nucleus of the secretion, but experiments have not proved the truth of the supposition. When the ears are so encumbered, the rabbit seems to avoid being handled by them, and shrinks as with pain which is evidently experienced.

Treatment: The most simple and effective remedy is to rmove or loosen the wax with the quill end of a feather, or other blunt, smooth instrument, avoiding the giving of pain as much as possible. Allow the rabbit to shake out the loose particles, and then sprinkle into the ear, as far down as possible, flowers of sulphur. Repeat this two or three times, at intervals of three days, and probably without further aid from the quill, except it be to remove some large piece from the ear, the cure will be complete, and many months may elapse before it is again necessary to repeat the treatment. Another remedy is to drop a little sweet oil of almonds into the ear twice a day, until the sores are softened, and then remove them with a soft rag or sponge. If this leaves the ears inflamed, dress them with sulphate of zinc lotion, two grains of sulphate to one ounce of water.

ERUPTIONS.

Symptoms: The skin becomes scaly, and later small sores break out and the hair falls off. The eruptions appear at first sight like a white scruf, but upon examination little sores will be found, which cause the hair to come off. Impure blood and the impurity of the air in which the rabbit lives frequently cause such appearances. The hair will grow again when the blood is purer and the skin free from the eruptions.

Treatment: Apply to the sores either carbolated vaseline or white zinc cintment. Give a mild cathartic, followed by a blood purifier. Half a teaspoonful of castor oil will do for a physic, and the condition of the powder in the food will change the blood so that a cure will be effected soon. Or, apply to the part affected a thin ointment of lard, flowers of sulphur and a little carbolic acid, all well mixed, and used every other day. If the pistules are at all like boils, which require relief when ripe, they may be opened with a penknife (as directed under the head of abscesses), but it is not advisable to do this except in cases of real need. Keep the patient warm, but allow plenty of fresh air, and a cure will be effected in a short time.

EYES, COLD IN.

Symptoms: Inflammation of membrane of eyes, accompanied by profuse tears.

Treatment: Bathe the eyes once or twice a day with lukewarm water and sulphate of zinc, two grains to one ounce of water.

EYES, SORE AND SWOLLEN.

Symptoms: Difficulty in opening eyes, avoidance of the light, eyes entirely closed for days at a time. Seen most frequently in the young, and is caused by uncleanliness, especially the ammonical vapor arising from dung saturated with urine and allowed to stand in the hutch. The eye may protrude slightly from the socket, and around the lid may be seen small red pimples, which will often spread to the forehead, roots of the ears and neck. Blindness is the result of neglect.

Treatment: Clean out the hutch and thoroughly disinfect it. Remove the patient to a clean, warm hutch, well-ventilated, and apply with a sponge, twice a day, a little warm milk and water, for three or four days, and allow a liberal diet. If at the end of that time there is no perceptible improvement, as a last resource apply with a clean sponge a solution of one-fourth oz. of white copperas to a pint of water. Avoid as much

as possible giving pain, for when the rabbit suffers from this complaint the eye is remarkably tender, and requires delicate handling. Generally, in a week or two a cure may be expected, if the disease has been taken in hand in time.

FESTERS.

Symptoms: Wounds from fighting or other cause, will not heal. The cause is dirt getting into the wound, or poor health.

Treatment: Find the soft place where the head is forming and lance it. Press out all matter and sponge the part clean. Dress with the following ointment, to prevent matter re-forming: Levigated red precipitated one-half dr.; bluestone (sulphate of copper) in very fine powder one and one-half dr.; spermaceti ointment one ounce; carefully and thoroughly mixed. Feed with soft food, and mix in it a little flowers of sulphur. We have seen it recommended to apply a cold-water compress, or bandage, after lancing, as tight as the animal can bear it, changing twice a day, and keeping it as wet as possible by placing a little oilskin between the inner and outer bandage.

FITS.

Symptoms: The patient holds head on one side. A wildness about the eye is observed, the limbs are weak, and the animal seems to stagger in moving. When taken up, it will apparently swing about in the hand, and when placed upon the ground, roll over several times in the most frantic manner, as if suffering the most acute pain, and after several convulsive struggles, lie as if perfectly exhausted, with one cheek on the ground, and the whole head distorted, so as to present anything but an agreeable appearance. The cause may generally be attributed to a defect in the digestive organs, from which the animal becomes overweighted with food (for the rabbit will usually keep eating, suffering as it is). When the attack is treated in its early stages, it is seldom fatal, except in old rabbits. Does suffering for three weeks with these attacks have been known, after recovery, to give birth to litters.

Treatment: The rabbit should be kept warm, yet not too close, for free circulation of air is essential to its recovery. Administer four grains of powdered camphor in two teaspoonfuls of tepid water every day for a week, if it be necessary to do so for that length of time, but probably after the fourth day a change for the better will be noticed. The head will be held more in the natural position and there will be a firmness

in the limbs as when in health. With these favorable symptoms, give the camphor every third day for a week or so more, and in smaller quantities, until perfect health is restored. Give a liberal supply of herbaceous food—as green clover, dandelion, turnip tops—not forgetting a little sweet hay and crushed oats. When the bowels are in a healthy state there will not be much to fear.

HOCKS, SORENESS OF.

Symptoms: Boils on the under part of hind legs. The disease very often arises from the hutch not being properly cleaned, and the rabbit having to stand in damp litter.

Treatment: Good litter in the hutch, and cleanliness. Apply vaseline and bandage the hind legs. These bandages the animal will probably tear off, so that frequent renewal may be necessary. If the soreness is on the upper side of the foot, near the claws, there is less difficulty. Another remedy is to bathe the sores frequently with sulphate of zinc solution, two grains to the ounce of water. Keep the rabbit warm and quiet, well supplied with nutritious food, and there is every possibility of an ultimate cure. If the sores run with matter, wash the places thoroughly with a soft sponge till they are well cleaned out. Then, if there is any matter remaining, put on a bread poultice to draw it out. After this is done, powder with fuller's earth and bandage the place well up. Another authority says to sew a bandage around the hocks, put fuller's earth thickly under it, and then wet it frequently with zinc lotion. In the morning meal of soft food mix once or twice a week a small portion of flowers of sulphur, which will cool the blood, and at the same time clean the stomach. Give a moderate supply of dandelions or other green food. The following ointment will also be found a useful application: Precipitated chalk 2 dr., carbolic acid and glycerine 2 dr., lard one ounce. Mix thoroughly.

INFLAMMATION OF THE WOMB.

Symptoms: Fluid discharge, inflammation and soreness of parts. Caused by improper mating. If animals of the proper size and age are mated, this trouble will not occur.

Treatment: It will take time to cure. There are several remedies, one of the best being one dr. sulphate of zinc and one dr. laudanum dissolved in a pint of distilled water. Bathe the parts with this lotion, lukewarm, once a day until inflammation subsides, then every other day until cured. Wipe the parts dry after washing, as the lotion is poisonous and the doe

may lick it off.

INSECTS.

Symptoms: Fleas and nits will not afflict Belgians if cleanliness be observed. The vermin will be found most often around the ears and forehead. Loss of appetite and leanness will follow unless the pests are removed.

Treatment: Cut the hair short in the places most infested as this will facilitate the application of a sprinkling of sulphur (which is always beneficial to the skin, which should be rubbed well down to the roots of the hair. Apply also a sprinkling of white hellebore, which, if blown through a small bellows, as used for insect powders, will be forced to the roots of the hair, and a few applications will generally exterminate the insects. Hellebore is poisonous when taken internally, and care should be taken that the animals do not lick it off. Pennyroyal in the bedding is a simple and sure preventive.

LIVER DISEASE, OR ROT.

Symptoms: The patient has difficulty in breathing, which is heavy, and at times accompanied by a noise. The patient eats well, and seems otherwise in health, and does will rear their litters when thus attacked; but, as may be supposed, the offspring are not so strong and healthy as those born under more favorable circumstances. If the rabbit be of little value, it had better be killed at once, but if a valuable one, to attempt the cure, or at least retard the progress of the disease, may be worth the trial. The attack on the liver is caused by a small parasite, called a fluke, which attaches itself to the liver, and causes it to decay, and eventually to become almost rotten. The liver of an animal which has died from this disease is found to be spotted.

Treatment: If the appetite is good, and the digestive organs are in a healthy state, give one grain of calomel in two doses, at intervals of 12 hours. Give plenty of fresh air, without draught, and keep the hutch clean and dry. In the analogous disease, which proves so destructive to sheep, especially those fed on low and marshy land, the following has been used with good effect, and may prove useful in the rabbitry: Take of nitre in powder 3 dr., ginger in powder 2 dr., common salt one-fourth pound, boiling water three pints. Pour the boiling water over the ingredients, and when lukewarm, add three ounces of rectified spirits of turpentine, and agitate thoroughly. The dose of this mixture will be a teaspoonful given in early morning, an hour before the rabbit is fed.

and repeated three times, at intervals of four days. It is of the utmost importance that the mixture be thoroughly well shaken at the moment of pouring out the dose, to insure the equal distribution of the turpentine. Another form of diseased liver arises from derangement of the appetite and probably the digestive organs, leading to acute and chronic inflammation, and in such cases, one gr. of gray powder (mercury and chalk) may be given twice a day, giving, with other green food, a fair proportion of dandelion.

MANGE, (SEE ALSO SCURF).

Symptoms: Gray, scaly hard skin at the roots of the hair, more perceptible to the eye than to the touch, around the eyelids, nose and roots of the ears, and a greater or less loss of hair. It is infectious, and is often caused by a too habitual feeding upon dry food, and is generally more troublesome in winter, when green food and roots are not easily obtainable, than in summer. Another cause is the want of proper ventilation and cleanliness in the hutches.

Treatment: Isolate the patient and sprinkle daily on the parts affected flowers of sulphur for a week. Should this prove ineffectual, use the ointment as recommended for scurf. Or melt four ounces hogs' lard with moderate heat, and add one-fourth ounce oil of vitriol. Stir well together until cold, and apply for three or four days in succession. If the conveniences are at hand, the oil of vitriol and lard are easier and better mixed cold in a mortar, or on an ointment slab. As this ointment would prove injurious to the eyes, care must be used in its application. In places where the hair comes off by the application of the above remedies, the following restorative will be found of use: One-half oz. honey, one-half oz. laurel oil, one-half oz. linseed oil and one-half oz. onion juice; mix well together and apply every other day for a week. A decoction of birch is also a simple and effectual lotion for this purpose; and if sulphur is occasionally given with the dry bran or oats, it will be of service; or a little sulphur may be rubbed around the nose, roots of ears and around the eyes, as it acts as a preventive to both scurf and mange, and as such is more effectual and far less troublesome than any cure.

MATTED HAIR.

Treatment: Use scissors to open all the matted hair, carefully avoiding injury to the skin, and then, with a patient use of scissors and a metalcmob (which is stronger than horn) the coat may be rendered clean again. The skin is often laid

bare in places by this process, but the hair will soon grow again if the Belgian be kept warm and well fed, which is necessary after the rather painful process.

MOULTING.

Treatment: When from eight to ten weeks old, Belgians begin their first moult, which is not always passed through without serious results. During this process of nature, care should be taken to keep the young ones warm, but it is by far the best plan to let them remain with the doe until they are safe through this trying ordeal, which will generally be about the tenth or twelfth week, after which the chances are that with due care and attention the patients will pull through. Feed the doe well with good nutritious food. It will be observed that the fur at three weeks is unlike that at ten weeks, and this, again, is more down-like than that of the moulted rabbit. In the second covering there will be the permanent shades and markings, from which there will be little or no deviation, except in a few instances. The rabbits can be assisted in their moult by giving them plenty of soaked peas and barley meal, with a little boiled linseed mixed with it.

MOUTH, SORE.

Symptoms: The patient feeds in a hesitating manner. The cause may be either overgrown teeth or tender gums. In the latter case, the gums will be inflamed and swollen.

Treatment: For sore gums, wash the mouth out with a little alum water. When the cause is overgrown teeth, reduce their length by means of a file or pair of wire-cutting pliers. These means should not be resorted to until absolutely necessary, as, the enamel being destroyed, the teeth will decay more quickly.

PARALYSIS.

Symptoms: The patient drags its hind legs along in the most pitiable manner, and remains in this state for days. Whenever want of activity in the extremities is observed, prompt measures should be taken, as every hour is of importance. The cause of paralysis is frequently a damp hutch. The immediate cause is said to be disease of the kidneys, which causes a deposit in the bladder. A thick, white matter will be found in the bladder on a post mortem examination being made.

Treatment: Four gr. of camphor, 2 gr. of sulphate of iron, mixed in a little powdered liquorice and treacle, given in the form of a small pill every other day. Apply also along the spine, particularly in the region of the loins, a little turpen-

tine, well rubbed in twice a week. To facilitate this process, the hair should be cut short. It will soon grow again. A blister, if it can be retained in the right position, will be found of advantage, but, on the whole, the other remedies are nearly equally beneficial in results, and more convenient in their application. The following may be used as a mild blister: Four oz. lard, three-fourths oz. beeswax, three-quarters oz. powdered cantharides. The wax and lard are melted together, and the powder stirred in. This ointment should be rubbed into the skin, or spread upon a piece of linen, and kept in its place by bandages until the pistules rise. Spirits of turpentine sprinkled on a flannel which has been wrung out in hot water makes a convenient blister. The blister should be dressed with olive oil, or spermaceti ointment. Rochelle salts, as much as will lie on a quarter, given once or twice a day in some soft food, has been recommended. The general health of the rabbit is tolerably good during its state of helplessness, and it will eat almost as usual, especially for the first few days, after which want of exercise tends to lessen its relish for food. The rabbit should be kept warm and well supplied with the best and most nutritious food. The attack lasts from six to ten days.

POT BELLY, OR DROPSY.

Symptoms: Swollen belly, good appetite followed by loss of relish for food, and sluggishness. It is caused by too small a hutch, or a hutch dark and damp, an excess of green food, irregularity in amount of food, or lack of exercise.

Treatment: Separate the patient from the others, and give plenty of room for exercise. A run upon the dry ground for an hour or two each day in warm weather will be found beneficial. Feed dry grain and bread toasted brown. Put a piece of scorched bread in the drinking water. Give dry food—as oats, barley, split peas, leaves of the oak tree, dried; and after a few days of this, a little water may be given, also a sprig or two of sage, parsley, thyme, or ivy leaves, if the rabbit will eat them. Carrots will be found advantageous if given in small quantities, but must be given sparingly, as the too free indulgence in succulent diet is the cause of the mischief.

SCURF. (SEE ALSO MANGE.)

Symptoms: The skin becomes rough to the touch,and comes away in little white flakes. The disease especially presents itself in the nose, roots of ears, and eyelids, but it may be noticed almost all over the body. The rabbit has a rather

more dull and heavy appearance than usual and if the attack be left uncared for, the rabbit will be sacrificed. The patient must be well fed and with plenty of fresh air there is not much to fear, provided the disease is treated in its first stages. The disease is contagious.

Treatment: Isolate the patient in a clean, warm, well-ventilated hutch. Tear in pieces an ounce of roll tobacco, pour upon it half a pint of boiling water; when cold, add six grains of cayenne pepper, stir well together and apply with a sponge to the roots of the hair where affected. Repeat this every other day, and on the second or third application the scurf will come off, and in all probability the hair will come with it, but the hair will soon be restored. Another remedy is sulphur mixed with oil. Whale oil is the strongest, but is rather offensive in smell, and need seldom be used, though it is decidedly efficacious. When it is of the consistency of thin paste, apply it once every three days, rubbing it into the skin, removing the hair with a pair of scissors to facilitate the process. Sulphur mixed with lard is also effective as a cure, and more agreeable to the patient. Linseed simmered till soft, and thickened with barley meal or middlings, with a small teaspoonful of flowers of sulphur mixed in, forms a good food. A few dandelions may also be given.

SLOBBERS.

Symptoms: Flow of saliva-like fluid from the mouth. Cause indigestion. Prevalent among young stock where litters are too large. The young, failing to get nourishment from the overworked does, help themselves to food from the pen, and their stomachs are not strong enough to digest the mass.

Treatment: Keep the patient in a cool, well-ventilated hutch, but sheltered from draughts, cold winds, or the direct rays of the sun. See that its bowels are kept open by a regular supply of green food. For a local application, wash its mouth with alum and water every four hours, or rub a handful of powdered alum and salt, equal parts, well into the affected parts. Give half teaspoonful doses of syrup of figs until the bowels move freely. Feed mash with half a teaspoon of condition powder to every four ounces. Give food which is easy to digest. See that the salt supply is regular. Ten drops of oil of juniper and sweet spirits of nitre mixed with the drinking water morning and evening is another good remedy for slobbers.

SNUFFLES.

Symptoms: Sneezing or coughing followed by a discharge from the nose of a white, glutinous matter. This complaint is of two kinds. One comes from a simple cold in the head and it is not infectious. The other is hereditary or chronic and may be communicated. In its symptoms the disease bears a strong resemblance to influenza in the human subject, and is to be attributed to the same cause, namely, exposure to cold draughts, or sudden extremes of heat and cold. Belgians in damp hutches, without proper protection from cold draughts, are liable to this troublesome and often fatal complaint which, if not attended to as soon as observed, requires long and patient treatment. The rabbit is heard sneezing, while a moisture is perceptible around the nostrils. Loss of appetite follows, and in a few days the nostrils are apparently closed with mucus. Inflammation of the lungs frequently supervenes, and death. A slight cold, if allowed to run, will develop into snuffles.

Treatment: Keep the patient isolated, warm and well fed. Give a few boiled potatoes, with a little salt. Barley meal, mixed into a paste and given warm will be beneficial, and carrots should form at this time part of the vegetable diet. Wash the nose, mouth and forelegs well with carbolic soap. As medicine, give three grains of sulphate of copper, finely powdered, every day for three or four days. Then, when the mucus disappears, a cure is nearly certain, but care and special attention are required for a few days more, and it will be better if a grain of the sulphate be sprinkled with the bran every other day until the patient is perfectly restored to health. The disease sometimes will continue two or three weeks, especially in damp, foggy weather. A useful mode of treatment is to sponge the nose with vinegar and water in equal proportions, as warm as the rabbit can well bear it. Give one of these powders three time a day, separate from food, with a teaspoon: Powdered licorice 36 grains, powdered nitre 24 grains, powdered ginger 12 grains, ipecacuana one and one-half grains. Mix thoroughly and divide into 12 powders. In hard cases, use two drops tincture of aconite in the food, twice a day, and the patient will stop sneezing. Feed warm mash with a teaspoonful of flaxseed in it.

TUMOR.

Symptoms: Large hydatids, or watery tumors, appear on

the hindquarters.

Treatment: Keep the patient warm, particularly after any surgical operation has been performed. Feed well, and treat the case in its first stages, as the most favorable issue may then be hoped for. The operation ought to be performed only by a surgeon, after etherizing the patient. If hares thus afflicted die and are eaten by dogs, the dung of the dog will contain eggs which when dried on herbage and eaten again by hares, afflict the hares with tumors. Human beings are not affected. Neither the Belgian hare, nor any rabbit, is afflicted with "worm in the neck," and tapeworm.

CAKED UDDER.

Treatment: Feed sparingly for a few days and rub gently with marshmellow ointment, first sponging the udder with warm water and wiping dry.

URINE, RED OR UNNATURAL COLOR OF

Symptoms: Dark urine, red as if tinged with blood; patient out of sorts.

Treatment: Place he patient in a warmer hutch, if the one it occupies be not comfortable, and supply it with good food —as oatmeal, boiled potatoes, given warm, a few oats, a little endive, dandelions and carrots. Garden parsley, green in summer, dry in winter. A few drops of sweet spirits of nitre occasionally. Two tablespoonfuls of water in which bran has been soaked 24 hours may be given every day until the urine presents its natural appearance, which it should do in from four to eight days.

LESSON FOURTEEN.

——Experiences in Curing Ailments——

Recipe for Mange Ointment—Bleeding from the Gums in Fits —Salts and Senna for Constipation—Snuffles Found Wherever There is Overcrowding and Filth—Is Snuffles Contagious and Infectious?—Injections of Warm Water For Constipation—Powdered Carraway for Snuffles—Boracic Acid for Snuffles and Canker in the Ear—Hereditary Snuffles—Overfeeding a Cause of Much Disease—Salt as a Preventive of Slobbers—Mercury for Liver Diseases —Alum and Borax for Slobbers—Recipe for Powder for Curing Lung Fever—Cold Water and Nitre for Diarrhoea —Recipe for Food to Prevent Convulsions in Moulting.

No. 400—"In cases of mange, I have found the following effectual in several bad cases, and which has not had the tendency to turn the animal sickly. Mix a small portion of black sulphur in lard until it forms a kind of salve or ointment, and rub the parts affected with it night and morning, taking care that if rubs off with the scurf. The animal will lick some of the ointment off, but this will not be injurious, but rather the reverse. Give a good feed of sweet hay at least once a day, and a moderate supply of green food, as mange often arises from the want of proper succulent food. Keep the hutch well cleaned out, and let the rabbit have a good supply of litter and a drink of acid milk once or twice a week. The usual prescription for mange in dogs is the green iodide of mercury ointment, made with one dr. of the iodide to seven dr. of lard, and it is worth a trial with rabbits. The ointment should be well rubbed in every day, and any adhering to the hair should be carefully wiped off to prevent the animal licking it. Mange being infectious, the affected animal should be isolated."

No. 401—"In case of fits, I have found that bleeding from the gums above the front teeth, and doses of camphor water is the treatment most likely to be of permanent service, though a complete cure is rarely effected."

No. 402—"Salts and senna, with a few carraway seeds in it, is the best medicine for constipation, and I have had rabbits which were quite distended with wind completely cured in one night by this treatment."

No. 403—"I do not desire to pose as a final authority of this or any subject connected with the care and breeding of hares. I shall be willing at all times to give the results of my observations and study on all subjects connected with the Belgian.

Snuffles is caused either by neglect and filthy hutches, overcrowding in pens, or exposure to sudden and extreme changes of temperature. It can be detected in most cases in its first stages, by examining the nose and front feet. If the nose discharges a sticky, white mucus, the proper treatment should be applied at once. The disease has not become snuffles at this stage. It is merely an indication, and if from dirt or exposure, the correcting of these ills will bring about a cure, but if left to itself will, probably, result in a genuine case of snuffles. Sneezing alone is not an indication of snuffles, and if not frequent need cause no alarm. Most all animals will sneeze. The best means of stopping the difficulty in the beginning is to take the individual and put it in a pen alone, where there is sunlight and air in plenty. Keep clean and fed regularly with the usual diet, and an addition occasionally of a quantity of fine oil meal, most cases will need no other treatment. If not checked, the disease will increase in severity, the discharge from the nose becomes offensive, the odor like decayed cheese, and can be easily detected. No matter how much care is taken to overcome the smell, it is unmistakable. At this stage, the subject looks dull, the fur on end, and though it eats well for a time, soon loses flesh. The disease goes to the lungs, or stomach, and then to the bowels, causes a fetid discharge which, in a few hours, will be fatal. My observations, which have extended to many of the largest rabbitries in the country, have satisfied me that the disease will be found wherever overcrowding and filth abound. I find, also, that almost all have some of it, though among the older breeders I find none of that anxiety and fear about it that is prevalent with those newer in the business. If handled properly, the breeder has no cause for uneasiness, but I advise taking it up promptly, and if the subject does not show improvement after isolation and treatment for a reasonable time, kill it, but if be a valuable animal, I would not be too quick with that remedy. I believe if the subject be a doe, of fine strain, I would breed her promptly, and breed a nurse doe at the same time, and when the young come transfer the litter to the nurse doe, and raise them in that way. I do not believe that the disease is either contagious or infectious, but to be on the safe side is the best. In this way, you preserve her strain in your rabbitry. If she can stand another breeding, breed her again, following the same course. If she dies, as he probably will. You have lost only the doe.

You have her young, and keep them clear of the disease."

No. 404—"I had a valuable rabbit that had been suffering from an obstinate case of constipation cured completely by following the prescription of a friend. The rabbit had been ailing for some time. It had been fed with a variety of green foods, and had even had doses of salts and senna tea, but without result. My friend advised an injection of warm water and castor oil, in the proportion of three tablespoonfuls of the former to one of the latter, administered with an injection pipe fastened to a small sheep's bladder, to be followed, if this failed, in three hours, by an injection of warm water alone. And if this did not produce the desired result, the water and oil to be again tried. He further recommended, as a last resource, that the hind legs of the rabbit should be placed in warm water for about ten minutes. I gave the warm bath, as direced, with perfect success, and have since tried it in other cases with equally favorable results."

No. 405—"For mange, take 12 ounces of cottonseed oil and four ounces of kerosene. Mix and then add a sufficient quantity of sulphur to bring it to the consistency of cream. Apply with the hand, rubbing it well on all sore or mangy spots."

No. 406—"I have found powdered carraway, given in hot meal, superior to all other remedies in snuffles."

No. 407—"Snuffles is what is technically called ozaena, and after insuring perfect cleanliness and free ventilation, I find the most successful treatment is boracic acid blown up the nostrils every night and morning for a few days. This is a simple, safe and effectual cure for the disease. I have made experiments with several remedies, but the above has proved by far the most reliable and, I may say, a specific. It is useless to expect any kind of special feeding, or irritants applied to the nostrils, to bring about a cure."

No. 408—"For canker in the ear, wash thoroughly with warm water and castile soap, rinse, dry, and apply once daily a sufficient quantity of boracic acid, working it well down into the ear."

No. 409—"In a case of snuffles, first isolate the rabbit, and place it in a warm, dry hutch. Second, bed it down with sweet hay, and for a few days wash the discharge from the nose with warm green-tea lction, feeding with good oats, swede turnips or carrots. If the discharge from the nose continues, then administer two drops of tincture of aconite in its food, morning and evening, until the patient gives up sneezing,

and then continue the medicine every day until the rabbit is restored to health. Third, should the rabbit discharge from the eyes, and soreness show itself on the nostrils, then wash with a sponge twice a day with carbolic acid lotion (one drop of carbolic to ten of water), being careful not to let the rabbit lick the lotion and the soreness in a few days will be removed. Examine the fore feet of the rabbit, and should any matter from the nose be clotted on them, wash it off with warm water to prevent it from irritating the wound on the nose, and good results will soon be observed. Fourth, should the rabbit have a bad appetite, give some warm tea leaves, and almost dry, or any similar tonic, in the food. I have known cases of hereditary or congenital snuffles resulting from breeding from a sire suffering from the disease at the time of breeding, and such cases are generally incurable."

No. 410—"Experience has taught me that hares, when they have their little sicknesses and troubles, are very easily cured if taken in time, and a little judgment and care used. Parties say to me: 'My little hares are dying. What is the matter?' Upon inquiry, I have ascertained in almost every case a very careless manner of feeding. One gentleman who had come to me for advice said: 'I keep food before them all the time. I do not know what more I can do.' The fact of the matter was that he had fed them to death. Hares can no more eat all the time than can people, or any other creature. Another gentleman said his little ones had the slobbers. 'Do you ever salt them?' was asked. 'No.' Therein lay one great cause of their having the slobbers."

No. 411—"To feed so as to prevent slobbers, take a lump of ordinary barrel salt, the size of a hen's egg, dissolve it in four quarts of water, soak the oats in the solution for three hours, then place them on a screen to dry for at least an hour before feeding."

No. 412—"I had a fine doe die, no apparent disease. I opened her and found the liver very much enlarged, and white spots on it. She had been dead not much over a day, and smelled very offensive. I think a small quantity of mercury given when the hare seems off its feed would be of great advantage. I have used it with great success."

No. 413—"Every breeder who has had experience in raising Belgian hares or rabbits of any variety has suffered more or less loss through slobbers. It is caused by the food becoming impacted in the stomach and forming an indigestible mass on

which the gastric juice does not act, the result being that the saliva instead of passing into the stomach and aiding the digestion, oozes out of the mouth, forming an irritating, slimy substance which adheres to the fur. The hare in its efforts to clean itself with its front legs besmears its face, neck, chest and front legs. After an examination of the contents of the stomach of several hares after death from slobbers, the same impacted condition of food was found in each. Knowing that salt was used with nuts, popcorn, etc., to act as a disintegrator and to aid digestion in the human stomach, I arrived at the conclusion that it would have the same effect on the hare. I found that the young hares did not take enough from the lump salt placed in the hutch to accomplish what I desired, namely, the disintegration of the contents of the stomach and thus prevent the slobbers. Even by adding a dish of common barrel salt, they would not in all cases eat enough of it to keep them from having the slobbers, therefore I have adopted this method: After they show symptoms of slobbers a teaspoon of salt water administered as it would seem necessary from the stage of the disease will usually effect a cure unless the condition is too far advanced. A rubber bulb syringe will be found very convenient in giving liquid medicines to hares."

No. 414—"For slobbers, wash outside the mouth and jaws with warm alum water twice a day. This will contract the glands and stop the flow of saliva. Powdered borax in water is also very good; give half a teaspoon of some simple laxative until the bowels move freely. Do not give any food hard to digest for a few days. Bathe their eyes with sulphate of zinc, about three grains to an ounce of water, and they will open immediately. This is a grand remedy for an eye trouble, but don't leave it where the rabbit can get near it, for it is poisonous."

No. 415—"In cases of lung fever, the first symptoms of a roaring or rattling come undoubtedly from the lungs, which are inflamed and sore, caused by exposure to cold, a trouble which is especially liable to come to breeders in a climate like Colorado. The reason for the animal staying quietly in its corner is the pain he is enduring, and his desire to remain quiet without moving about is in accordance with the action of other animals afflicted in the same manner. As a cure, give four times daily from five to twenty grains of acetanilid, a white powder, which can only be given dry by placing in

the animal's mouth and holding the nose up until swallowed. The powder is a coal tar preparation recently brought out for the cure of lung fever, and has been found very effective. A few drops of pure listerine may also be given occasionally to allay irritation until the patient begins to improve."

No. 416—"During the last few months several breeders of Belgian hares have written me regarding the snuffles in rabbits, asking if my hutches were infected. My answer was an emphatic no in every case, yet the Belgian hares I have bought during the last 18 months have all arrived, with one exception, running at the nose and discharging a white matter. To me it is a case of pure neglect, as rabbits, if they are properly housed and not allowed in draughts, or to get wet, will certainly be free from malady. I have seen rabbits of all breeds, young and old, but so far I can find few as healthy as mine, and none more so. In Belgian hares, of which I have had some 250. I have never had one off its feed, and after I had cured the snuffles in the ones I had purchased, there was no return of that disease, and no youngster ever inherited it. I want to give credit to whom credit is due, and I will say that my prevention and cure has been tight hutches, no draughts, no wind blowing directly on the hutches, and the free use of Sanitas. My hutches are cleaned twice each week, fresh shavings, which I buy in bales, being used for bedding, while a handful of Sanitas sawdust is sprinkled on all damp spots previous to putting in the fresh shavings. This kills any bad odors, and the rabbits constantly inhale the disinfectant, which keeps their health much better and purifies the air of the rabbitry. If they are sneezing badly, I drop a little Sanitas oil on the nose, not on the hair, as it is not so effective, but just so that a drop or two will enter the nostrils. I also wet the front feet with oil, which they rub on their face when washing themselves. When the discharge does not stop in a day or so, I inject a little Sanitas disinfecting fluid, one part fluid to four of water, in the nostrils, and use the oil as well. In every case a cure has been speedily effected, and what is better still, there has been no return of the snuffles."

No. 417—"Diarrhoea is best treated, not by cold water alone, as I first suggested, but by nitre in solution, which is much more efficacious, and the rabbit drinks it more eagerly. In snuffles I find powdered caraway, given in hot meal, superior to all other remedies."

No. 418—"If you wish to breed a first-class show specimen,

refrain from giving green food, or give it only in moderate quantities, such food having a great tendency to make the blood poor. To obtain the dark color in the points, and soft silky fur, you must keep the blood of the rabbits in as rich a state as possible. Young ones especially cannot stand much green food, being very subject to get relaxed in the bowels, which will kill them off in an extraordinarily short time; and it will be well to watch them after each meal, in order to counteract such effect as it appears. This may be done in the shortest space of time by giving one or two acorns, which no well-conducted rabbitry should ever be without. They should also be kept in a clean, well-ventilated hutch. A free use of whitewash will at all times be beneficial, and will also tend to keep their habitation free from vermin."

No. 419—"I allow the young rabbits to run with the doe until they are about seven weeks old, thereby ensuring them strength to get over their first moult. The following is a recipe which I have found very beneficial as a preventive against convulsions in moulting: Take one pound of flour, one pound linseed meal, one ounce ground ginger, one ounce salt. Mix into a very stiff batter with boiling water, then add one ounce camphorated spirits of wine and one ounce of essence of aniseed. The mixture should then be poured on a tin and baked in the oven until nicely browned, after which cut into squares. A piece about one inch square and half an inch think is sufficient to give a young rabbit once a week. I have found a few small pieces of camphor placed in the hutch very beneficial in the first stage of this complaint. A little powdered sulphate of iron sprinkled among their dry food being a good tonic, strengthens the system to meet this, the most critical time of rabbit life. Paralysis almost always follows a severe attack of the above complaint. I have found that rubbing the spine and loins with camphorated spirits will in some cases bring the rabbit back to health, but in most severe attacks the case is hopeless. Warmth and good feeding are esstential."

LESSON FIFTEEN.

——Exhibiting——

Show Pens Should Have Doors and Belgians Should Be Removed for Judging—Best Food for Exhibition Use—Exhibitors Must Properly Label Stock, Giving Also Selling Price—Judges Should Disqualify Any Exhibit Which Has Been Tampered With—Guarantee Must Be Posted by Every Complainant—Always Advertise the Name of Judge or Judges—No Rabbit Suffering from Contagious Disease Ever Should Be Sent to Exhibition—Keep the Belgians at Home Just as They Will Be in the Show Pen—Sometimes White Feet of Belgians Are Dyed by Unprincipled Exhibitors—Some Exhibitors Who Are Always Ready to Tamper with the Judges—Nothing More Dishonorable Than to Try and Pervert Judgment.

IN THE matter of exhibitions, the best authority is found in the words of Mr. J. Jennings of London, secretary of a well known rabbit society, and himself a fancier and a judge. In the course of an exhaustive paper published in one of the pet stock papers in England, he gives admirable advice from which the following is taken:

Having decided to hold a show, two points immediately present themselves for consideration—the accommodation and the judging. The number of entries selected will regulate the dimensions of the building; but, if possible, it should always be arranged that the specimens shall be in a single tier, for the convenience of visitors, and for the great advantage gained in light. The pens must be provided with doors, for rabbits can only be properly judged by removing each from each pen. The bottom of each pen should be liberally covered with sawdust, on the top of which is a good handful of hay, but not too much, else the rabbit will bury itself in it. Care should be taken to have good, sound food for them. Nothing is more disgraceful than to omit proper attention on this part. Good oats, carrots and swedes are the safest food to have on hand, though in certain parts of the country green food may be given moderately, providing it is fresh. Whenever it is possible, the pens should be fixed in position and arranged for the reception of their intended occupants before the latter arrive. The rabbits are generally long enough in confinement on their journey without being unnecessarily detained on their arrival.

The most important officer is the secretary, and while, on the one hand, no one should aspire to that office till he feels

prepared to carry out to the letter such an undertaking, it should be borne in mind by those with whom he is associated that it least a hearty vote of thanks is due him at the finish.

Exhibitors must properly label their stock. They must also state the prices at which they will sell. The judges appointed to award the prizes will be instructed to disqualify any exhibit which, in their opinion, has been tampered or improperly dealt with, and no appeal from their decision will be entertained on any ground whatever, the entrance fees in each case being forfeited. In the event of any one lodging a protest against an award, the individual so protesting shall be required to deposit $5 as security for its bona fide character. It shall then be examined by judge or judges, committee, and a nominee of protestor. The amount is to be forfeited if the protest turns out to be frivolous, but returned in full, and the exhibit or exhibits disqualified, where protest is found correct. No person will be admitted to the exhibition room during the judging, under any pretence whatever, except those actually engaged in the arrangements; and during the whole of the show all the specimens will be in the custody of the committee (who are non-exhibitors) and may not be touched or handled by the owners, or any unauthorized persons, under any circumstances.

Rabbit exhibitors have just as much claim to have their specimens judged by those who have made rabbits their study as poultry or pigeon exhibitors have the right of refusing to submit their exhibits to rabbit judges.

Several weeks before he show takes place, it should be advertised, and the advertising continued until the show takes place. Another point—always advertise the judge or judges selected.

No specimen should ever be sent to an exhibition suffering from a contagious disease which, although not perceptible to the general public, is nevertheless known to its owner. Reverse the case, and suppose that a valuable rabbit of yours caught a complaint at a show, and died therefrom, what would you say or think?

The great point is to keep your rabbits when they are at home in as nearly the same conditions as they will be subject to in the show pen. This is highly important, and there is a great deal more in it than many credit. Of two evils, that of high temperature is the worst. It is apt to throw them into moult and produce loose coats. A medium course is the best.

to adopt.

Duly appointed judges, who for years have made rabbits their study, should always be engaged. The combination of natural gift and study that makes the judge, embraces a knowledge of the special features and points.

Mr. W. Heath, another capable English authority, gives the following points: Be on the watch for tampered specimens. Sometimes the white feet of Belgians are dyed by unprincipled exhibitors. The first and greatest point in judging is to look at the specimens without any fear of offending or pleasing, and always to judge the specimens and never the owners. It is a known fact that there are many who are not very particular as to how they tamper with the judges, as long as they can get prizes. Exhibitors go around the pens and drop a little chaff, or grass, or green food, or anything of a particular nature, to mark their pens. Nothing is more dishonorable than for any one to try and pervert judgment.

LESSON SIXTEEN.

——Judging——

Judges Are Not Infallible—Uncertainty of Judging Gives Zest to Exhibitions—Hard to Influence a Judge with One Specimen—Show Him That Good Quality is Characteristic of Several Exhibits—Qualities Which Judge Crabtree Has Found to Be Most Generally Overlooked by Breeders—Judge Schuman on the Details of Scoring—Body Should Be Long and Lean—Stylish Carriage Has Much to Do with Racy Appearance and Beauty—Good Ticking—How the Ears Should Be Scored—Eyes, Feet, Legs and Dewlap—Importance of Being Up to Weight—Flesh Should Be Hard and Firm—Fault of Diverse Scoring Does Not Lie in Any Particular Card, but in the Application Thereof.

THE beginner will save himself a good many heartaches if he will bear in mind that judges are not infallible, and that one pair of eyes will see differently than another, no matter how skillful, and in spite of the best of intentions.

The uncertainty of judging in no small degree gives zest to exhibitions, for if it were certain that the famous, well-advertised animals would take all the prizes, the small exhibitors would stay away.

It is hard to influence a judge with one specimen. You should hammer away at him with all the good ones you have in stock. If you make a good sized exhibit, in attractive hutches, and your stock shows that it is well fed and well handled, you ought to fare well, that is, of course, if you have good blood. Breeding to the standard is absolutely essential, but it should not be forgotten that careful handling and training of your pets will mean a great deal, and in case of doubt will turn the scale in your favor.

Judge P. E. Crabtree says that his experience has led him to believe that the matters most generally overlooked, and consequently neglected in breeding, are shape of eye, quality of ear, as regards thinness, fineness of bone in front legs, lacing of ears, waviness of ticking and color of jaw and belly. He advises that special attention should be given the production of choice red feet and legs, and a beautiful jet black lacing confined closely to the edge of a pure golden red ear is perhaps the crowning feature of a well bred specimen.

Judge W .C. Schuman, one of the most successful of prize winning breeders, says some of our hare judges recklessly

stamp the word perfection in the color column. A pale-colored hare will be cut one-quarter of a point, and a chocolate specimen will receive the esame punishment, then when we strike the medium and secure a tan rabbit, we are surprised at seeing the ame old cut. Again, there is a vast difference between dull color and fiery tan. Brghtness is everything in the color line, yet the efforts of the fancier are discounted by having his hare punished the same in the color column as the one that possesses color without life. These mistakes probably are due to the fact that the industry is a new one and that the rough edges have not as yet been rounded.

The color of the Belgian, continues Mr. Schuman, should be a rich rufous, bright and clear. Due attention should be paid to the shade of color, its depth and brightness. Bright undercolor is not so valuable unless it also shows bright upon the surface, while surface color alone should be cut unless accompanied by depth and richness. Under these conditions the judge that pronounces the color absolutely perfect is making a rather broad statement. It can be found only in a few instances. The color on sides and haunches is considered as a possibility. Some specimens have been found that carried the back color evenly down the sides, breaking off sharply as the belly is reached. If the specimen is entirely gray upon the sides and haunches it is susceptible of severe punishment. If it possesses 75 per cent. of color in these sections, it should be cut the remaining 25 per cent., or one point, as four points are allotted to each section. The standard assumes that a light shade of color under the jaws will always be a part of the Belgian, and preference is given to those possessing a yellowish tint as against the snowy white.

The body should be long and lean, with belly carried close up, and great length of couplings. A hare with such a body should go well ahead of the short, baggy specimens. The loins should be well rounded, with the flesh firmly packed. The back is slightly arched, the curve beginning back of the shoulders and sweeping gradually over the rump, avoiding any tendency to squareness behind. A hare that chops off abruptly behind is an ugly specimen as regards shape.

Stylish carriage has much to do with the racy appearance and beauty of the Belgian. The specimen should stand up, showing daylight underneath, and should not crouch down in a frightened attitude. To attain this stylish carriage, the specimen should be frequently handled and drilled. Ticking

is a very important feature and should occur in waves. It begins back of the shoulders, widening as the loins are reached. The great tendency has been toward over ticking, giving the hare a dark, smudgy appearance. The ticking should contain lustre and not be of a grayish hue. As ten points are allotted to this section, the specimen can be severely punished if it falls badly. If the hare is entirely devoid of ticking, the rules of percentage would mean a cut of ten points. If it possesses 50 per cent. of ticking, it should be cut the remaining 50 per cent. or five points, and so on, until a cut of one-quarter of a point is reached, which means that the specimen falls only one-fortieth, as there are 40 quarters in 10. A cut of one-quarter in this section would require an exceedingly sharp eye upon the part of the judge, both as regards quantity and brightness. The head should be free from ticking except in the center of the forehead, and must also be long and lean, avoiding a tendency to pouchy jaws.

Good ears present an attractive appearance when looking at the front of the hare. The ears should be about five inches long, and fine in quality. The outer surface should be covered with hair of a good color, and the color should also show well upon the inner edges. Bare ears should receive a cut sufficient to cover them with fur and color. The lacing is a narrow band of black around the upper edges of ears. It should be bright and well-defined, with the ear color extending close up to edge of lacing, and without presenting a smudgy appearance at the upper portion of ear. The ears should be carried erect, close together and in a slightly backward direction.

The eyes are of hazel color, and should be large and prominent, with a bright, bold expression. A careful study of different specimens will assure all that it is a difficult matter to secure a really good eye, although it has been the custom to pass almost all specimens in this regard. The top of the tail should be red—or rather, that is what we are seeking. The tail should also curve straight up the back, and not be carried to one side. The chest should be long and lean (without fullness) and good specimens in the color line show the brightest upon the chest. The feet and legs are an important item. The fore feet and legs should be long, straight and fine in quality. They should be free from either white or black bars, and the color should be of a very bright tan. The hind feet should be evenly covered over the top with a rich, red tan, and the foot should be long and lean and not short and wide. If they

answer the above, the are correct. If snowy white and coarse, a cut of 100 per cent. will make them standard. If they fail 50 per cent., they should be cut the remaining 50 per cent. (or two points) instead of a quarter or a half. Some Belgians possess immense dewlaps, while others are about the size of a pigeon's egg. It has been the custom to cut the latter size one-half point, the punishment increasing in proportion to the size of the objectionable feature.

Belgians should be carefully prepared in order to guard against cuts for underweight. The penalty for underweight has been generally adopted as two points per pound. A specimen that lacks one-quarter should be cut one-half point; one-half pound receives a cut of one point, and so on.

Condition means much. The flesh should be hard and firm, like that of a racehorse. The coat should be well set on, and the fur of a fine texture, soft and silky to the touch. Quality of fur passes as perfect in almost all cases, but in any rabbitry one specimen can be selected that possesses a coat much finer in quality than the others.

There are numerous score cards, and Mr. Schuman is of the opinion that the industry will continue in its present chaotic condition until fanciers unite upon one score card and judges adopt a uniform system of cutting. It cannot be said that the fault lies in any particular card, but rather in the application thereof. Until the percentage system is adopted, comparison judging will find favor in the eyes of many, as it prevents serious mistakes on the part of the judges.

LESSON SEVENTEEN.

——How to Ship——

Shipping Tag with Directions for Feeding and Watering Should Be in Plain Sight—Not Necessary to Use a Large Box or Hutch—Make the Crate as Light as Possible—Two Tin Cups Should Be Fastened to the Wire Front, One for Water, the Other for Oats—Bag of Oats Should Be Shipped with Each Crate—How to Fasten the Tin Cups so They Will Always Keep in Place—How to Prevent the Expressman from Stifling the Hare.

A FEW rules are to be carefully followed in shipping Belgian hares, or trouble will result.

It is well to remember at the start that the animals are likely to pass through the hands of expressmen and others who know little or nothing about them. So on the shipping tag, or on another tag nearby, in plain sight, write or print directions for feeding and watering.

Of course it is not necessary to use a large hutch in shipping, nor is it desirable. Use, for single hares, a small box or crate which may be procured from any merchant. If it is a right-angled box, cover the top with wire netting, and bore holes in the top and sides so that when the box is piled with other packages in an express car, the animal will not be suffocated.

When several hares are shipped together, use one long, narrow box or crate with partitions so as to keep each hare to itself.

The box or crate for use in summer should be lighter and more open than that for winter shipment.

Make the crate as light as possible, bearing in mind that it must be strong enough not to "buckle" when boxes and crates are piled on top of it.

On the wire front, at the bottom, easily accessible to the hare on the inside, should be securely fastened two tin cups, one for water, the other for oats. Oats are all the food necessary for a hare in shipment, if there is plenty of good hay for bedding. One of the tin cups is for oats, the other for water. A bag of oats should be shipped with each crate, and the expressman directed to feed and water so that the cups will have something in them all the time.

For a tin cup, most shippers use the ordinary, cheap hand drinking cup, cutting the handle with a pair of stout shears and bending the pieces flat and tacking them to the woodwork

of the crate, thus making sure that the cups will be firmly fixed, and always in place.

If a box or crate with beveled top edges is used, the expressman cannot surround it with other boxes so as to shut off light and air.

The crate need not be much larger than the hare, for he will not be confined long.

The card of instructions to the expressman should caution him against subjecting the animals to sudden extremes of heat and cold.

LESSON EIGHTEEN.

——How to Develop a Business——

Advertising Not Always Essential, but a Great Help—Encourage Correspondence—How to Meet Competition—Preferment by Honest Judges in a Public Exhibition a Great Card for a Breeder—Book-keeping an Important Part of the Business—Methods for Marking Hares—Records Should Show Cost of Feed and Care—Money Spent on an Attractive Rabbitry and Hutches Usually a Good Investment—Need of Showing Signs of Prosperity in Order to Convince Inquirers That They Can Make Money by Buying of You.

ADVERTISING is not always essential to the development of a business, but it is a great help, and in some sections it is absolutely necessary. A very good business is sometimes built up, however, by breeders who secure such good specimens that their fame is spread by word of mouth.

The advertisement reaches a great many at the same time, and if the advertiser's story is intelligently and sensibly told, and he has something which is wanted, he is bound to interest people and begin to make sales.

It should be possible for the beginner to write an interesting, readable letter about what he has for sale, and encourage correspondence.

If the beginner is first in his neighborhood, he will be able to make a good many sales, and perhaps reap a great harvest, before competition sets in. When competition comes, he must remember that his stock and prices are to be judged by comparison, and he will be obliged to develop his business acumen.

The best way to get a reputation for handling good stock is to send it to an exhibition and there "beat the field." Preferment by honest and reliable judges is a great thing for a breeder. He will find the buying public turning to him with a rush to get stock able to take prizes, and therefore of unquestioned grade.

Do not neglect the bookkeeping part of your business. Mark your hares so you will be able to sort them if they get mixed. An easy way of marking is to twist a small piece of German silver wire into one of the ears, close to the edges. You may use the right ear for females, the left for males, or vice versa, and by placing the wire at a certain portion of either

ear, you have a system of marking which may be varied indefinitely.

Another method of marking is to notch the ear.

Records of breeding should be kept according to the calendar, so you will know just how your does are coming on. If your records are kept as they ought to be, you will not be surprised by unexpected litters.

Blanks for recording pedigrees may be purchased of printers and filled in with the name of rabbitry.

Keep adding to your stock from time to time new blood, either by the purchase of young bucks, or by service from a famous stud. Usually the money spent for service may be regarded as a wise investment. A judicious amount of inbreeding is not harmful, when the stock is worth it, but it is best to go outside for characteristics which your stock lack, and which you have tried to get without result.

Your records ought to show how often you have to buy feed, and what you pay for it, and how long it lasts, so you can form an intelligent idea of the amount of profit you are making. You will be able to save a great deal by a wise choice of food. Learn to utilize what grows wild around you, in whatever part of the country you may be.

When you begin to invite buyers to inspect your stock, you will find money laid out on a handsome rabbitry to be a good investment. Try and have the surroundings as clean and attractive as possible, for such matters will appeal to a stranger strongly. Unless you can make a good profit yourself, in raising Belgians, and show signs of having made money, it will not be convincing for you to advise others to buy of you in order to make money.

LESSON NINETEEN.

——Useful Hints——

Do Not Lift a Belgian Hare by the Ears—A Cat Deprived of Kittens Will Suckle Young Belgians—How to Accustom a Cat to Belgians—Dogs Which They Know Are Not to Be Feared—Belgians Are Good Swimmers—How to Tell an Old Carcass from a Freshly Killed One—They Will Defend Their Young, but Ordinarily Fight Only to Escape—Dung Good for the Flower Garden—One Cow Eats as Much as Forty Hares—When Bucks and Does Become Impotent—Explanations of Killing of the Young—Duration of Natural Life—How to Tell an Old Hare from a Young One.

IT IS WELL TO REMEMBER: That a Belgian should not be lifted by the ears.

That their amorous nature is perhaps their strongest Characteristic.

That males are, as a rule, more numerous than females.

That they fight with their feet, and make the fur fly, but the fights of jackrabbits are bloodless.

That the expression "As mad as a March hare" was coined by an observer, who watched them in March, their best mating time, when they are playful and full of antics.

That a cat deprived of her kittens will suckle a young rabbit.

That a kitten may be taken from its mother and given to a nursing doe. Such kittens, as they grow up, become accustomed to the Belgians and the hutches, live contentedly with them and guard against mice.

That they are susceptible to atmospheric changes, being restless and lively before a change of weather.

That they fraternize with dogs to which they are accustomed, but shrink from and are afraid of strange dogs.

That they may be trained to sit up at command and hold a small stick in the mouth, beat a tambourine, and perform other simple tricks.

That Cowper's hares, as he wrote about them, are famous in literature.

That the hare is an object of superstition on the Isle of Man. It is said there to be the favorite form of a witch. The most superstitious Manx people will not eat them, it is said.

That they are excellent swimmers when forced into the water, either fresh or salt, but prefer to avoid wetting their

fur.

That they should not be paunched until just before cooking.

That soaking in water, after killing them, draws out the blood, which the epicure wishes to keep in the flesh.

That they have no molars, or grinding teeth, but only cutting and gnawing teeth.

That when fresh killed, their flesh will be stiff, white and dry. When stale, it will be limp, and will have a bluish tinge.

That they may be made thin by a diet of acorns, which are rich in potash, lime and phosphoric acid, and are used as an astringent in cases of diarrhoea.

That white spots on the liver signify a tuberculous condition.

That they will defend their young fiercely, but are not fierce ordinarily, and do not retaliate out of vindictiveness, but only to escape.

That constant rearing in hutches has caused their meat to lose entirely the rank, savage flavor characteristic of wild rabbits.

That their skins make excellent glue.

That their dung is good for flowers, particularly vines and fibrous-rooted greenhouse plants.

That it takes forty or fifty hares to eat as much as one cow.

That they are polygamous, one buck being able and willing to attend to thirty does.

That a buck becomes impotent, as a rule, when five or six years old.

That a doe becomes impotent, as a rule, when five years old.

That the buck will kill the doe's young when they are blind and helpless, if allowed access to her hutch.

That if the doe is exhausted at the time of littering, and feels that she can suckle successfully only a limited number, she will kill the remainder. Some breeders claim she kills them to allay her thirst. Water should be plentiful at such a time.

That a doe breeding seven times a year and having eight young at each littering will find herself at the end of four years surrounded by 1,274,840, provided her offspring breed with the same frequency.

That the last remark shows how ridiculous is the contrast between figures and facts.

That the duration of their natural life is said to be from six to nine years.

That variety of food is essential to the production of the finest specimens.

That blood will tell, and that it is impossible to get points which are lacking in both buck and doe.

That starvation is something to look out for.

That their voice is seldom heard, but when it is, it is usually a weak, plaintive cry. When irritated, the cry becomes piercing.

That in Belgium they are fattened for the market by being confined all their days on a shelf a few feet from the ground, so narrow that they cannot even turn around. Lacking any exercise, and being fed on meat-producing food, they attain large size.

That poplar wood for the floor of the hutches endures the urine best.

That an old one is told by the general solidity and thinness of skeleton, especially at the joints, by a fat belly and extra length and extra thickness of nails. Sometimes the nails are cut by dealers to deceive the purchaser in the matter of age.

LESSON TWENTY.

——Conclusion——

Watch the Market Closely for Points—A Beginner Can Make No Better Start Than by Buying Belgians Which Have Taken Prizes, or Their Direct Offspring—Many Who Advertise as Breeders Are Also Jobbers, Buying Animals Everywhere to Sell Again, and Frequently Representing Them as Their Own Product—Good Belgians Not so Plentiful as One Would Imagine from Reading the Advertisements of Breeders—Starting with a Trio the Best and Quickest Way for a Beginner to Get Returns—Importance of Imported Stock—Shipping Rates from England.

THE rabbit fancier should watch the state of the market closely, and make up his mind to use his own judgment and not take sayso of others. He should welcome an exhibition, for there, if the judges are competent and honest, as they usually are, for no nonsense in judging is tolerated, and desirable animals will be indicated by the disposition of prizes.

The fancier then should make up his mind to get service from the prize bucks, or buy the offspring.

A beginner can make no better start than by buying animals that have taken prizes, or their offspring.

Most of the imported animals were bought in England, not from the original breeders, but from middlemen, or jobbers. The beginner should buy in the best place, where he can get the most for his money. Many who advertise as breeders and advise beginners to buy only from breeders fill up their own hutches from time to time by purchases outside, and retail the animals after having had them in their hutches but a short time. Good animals are not so plentiful as one would be led to think if he believed the advertisements of breeders. Good stock is advancing, and is sure to be appreciated at high figures when the exhibitions have weeded out "scrubs" for which absurd claims now are made.

Starting with a trio of hares is probably the best and quickest way to get returns without a long wait. A trio usually is made up of two does and a buck, and before shipping, the seller usually breeds the does to different bucks that are not related, so in a month the purchaser will have two litters, and with his own buck to draw on for service when needed, he is in a position to make quick sales.

The idea of having imported stock is worth something. It

increases the value of the young when you get some for sale. Shipments are usually made from London or Liverpool. The steamship company's rate to New York is 24 cents per cubic foot in United States gold coin. The steward's fee for taking crae of hares while in transit is usually $1.50 per hutch, providing that the hutch does not contain more than fifteen hares. The shipper also is compelled to pay the cost of feed at about twice its value.

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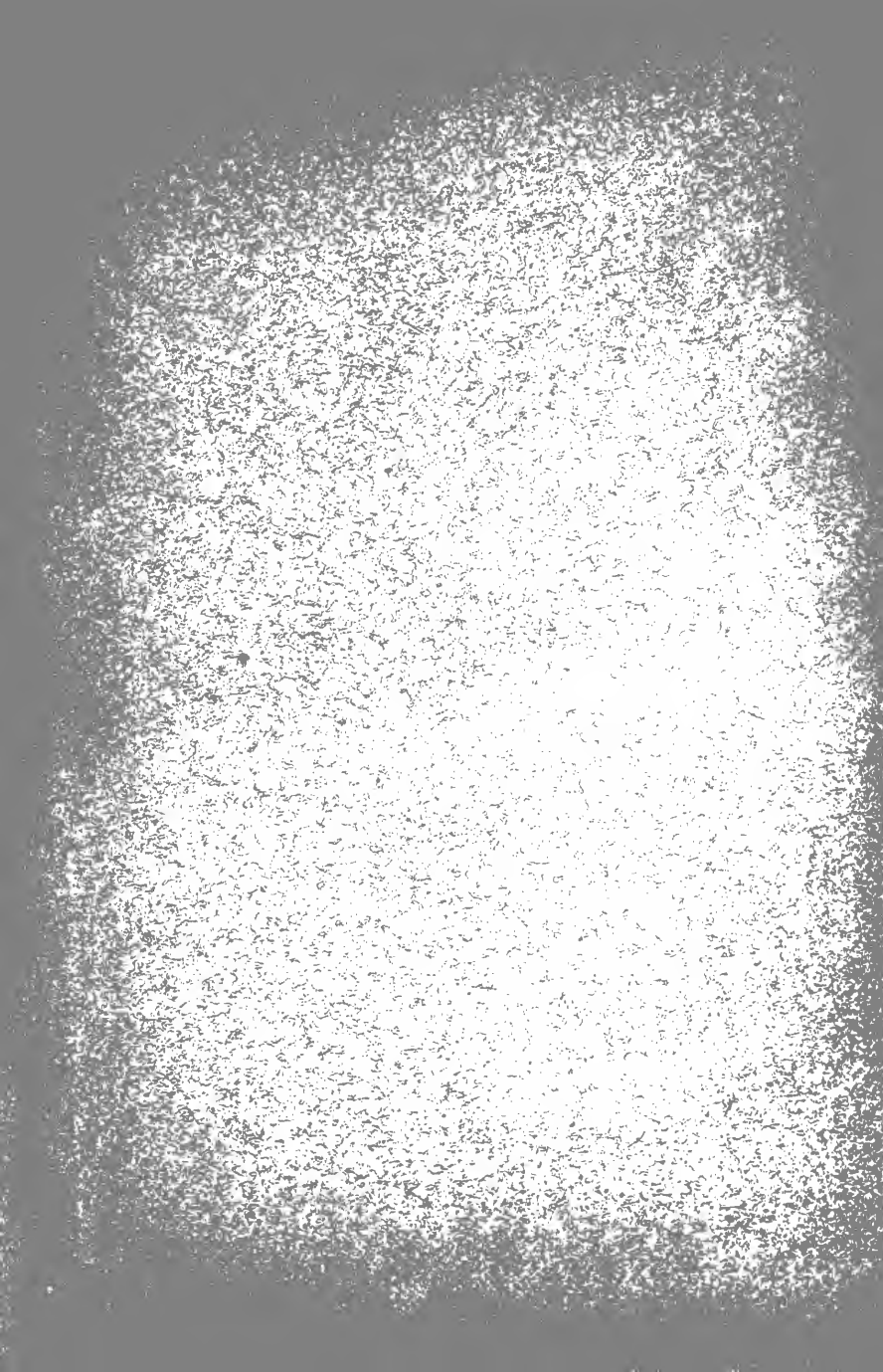

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